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ENERGY TAXATION ISSUES

HEARING

BEFORE THE

SUBCOMMITTEE ON
ENERGY AND AGRICULTURAL TAXATION

OF THE

COMMITTEE ON FINANCE
UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

ON

S. 233, S. 255, and S. 302

JANUARY 30, 1987

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ENERGY TAXATION ISSUES

FRIDAY, JANUARY 30, 1987

U.S. SENATE,
SUBCOMMITTEE ON ENERGY AND AGRICULTURAL TAXATION,
COMMITTEE ON FINANCE,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:12 a.m. in room SD-215, Dirksen Senate Office Building, the Honorable David Boren (chairman) presiding.

Present: Senator Boren.

[The press release announcing the hearing, the prepared statements of Senators Bentsen, Moynihan and Dole and a description of S. 233, S. 255 and S. 302 follow:]

[Press Release No. H-6, Jan. 21, 1987]

FINANCE SUBCOMMITTEE ON ENERGY AND AGRICULTURAL TAXATION TO HOLD HEARING ON ENERGY TAXATION

WASHINGTON, DC.—The Honorable David Boren (D-OK), Chairman of the Subcommittee on Energy and Taxation, announced today that the Subcommittee will hold a hearing on energy taxation issues. The hearing will begin at 9:00 A.M. on Friday, January 30, 1987 in Room SD-215, Dirksen Senate Office Building.

Senator Boren said the Subcommittee will receive testimony from a number of invited representatives of the domestic energy industry and from representatives of organizations that have recently issued reports on the current and future state of the domestic energy industry.

Specifically, Senator Boren expects to focus attention on his emergency energy legislation: S. 233, which would change provisions in the tax code impacting on domestic production; S. 255, which would repeal the Windfall Profit Tax; and S. 302, which impose an excise tax on imported crude oil and refined petroleum products.

Senator Boren said he also wants to address broader issues such as the current state of the domestic industry, the national security implications of the rise in foreign imports of crude oil and refined petroleum products, future trends in domestic production, and what can be done to prevent the premature abandonment of existing domestic production.

STATEMENT BY SENATOR LLOYD BENTSEN
BEFORE THE
SENATE FINANCE COMMITTEE
SUBCOMMITTEE ON ENERGY AND AGRICULTURAL TAXATION

JANUARY 30, 1987

Mr. Chairman, I congratulate you for conducting this hearing on the energy situation in the United States. Energy and particularly oil has become perhaps the most indispensible natural resource in the twentieth century. No nation can prosper without it and the continued economic growth and national security of the United States rests dramatically on reliable supplies of petroleum.

A NATIONAL ENERGY POLICY:

A realistic national energy policy must reflect this reality - that economic well-being and national security require reliable and secure oil sources. Crafting such an energy policy poses challenges because oil is the only strategic commodity in which the United States has confronted an embargo since World War II. It happened twice. And it could well happen again. Indeed, if current oil supply and demand trends continue, another oil embargo with its commensurate economic disruption is all but inevitable. And our nation requires an energy policy which reflects that unpleasant reality and is designed to minimize foreign oil dependence.

The risks of an oil embargo are directly linked to rising levels of foreign oil dependence. During the 1973-1974 embargo by the Organization of Petroleum Exporting Countries (OPEC), our oil dependence had crept up to 36 percent of U.S. consumption. And the second embargo followed after our import dependence hit 47 percent in 1977. Our dependence was whittled down to 27 percent in 1985. But then OPEC drove prices down to single digits. Today - a year later - oil markets continue to exhibit price instability.

Oil market instability is not in the United States' interest. It has crippled domestic production, sent demand soaring and sharply increased our dependence on imported oil.

Yet, the Administration remains frozen into a fair weather energy policy despite the storms clouds brewing on the horizon. Its energy policy has permitted OPEC to dictate domestic energy prices. That has enabled OPEC to succeeded in promoting demand over supply and in promoting imports over domestic production to the detriment of the U.S. energy industry. As a consequence, those policies have exposed our economy to disruption and threaten to hold our foreign policy hostage to OPEC. Moreover, they pose a genuine threat to our national security - a stark reality most elequently portrayed by the decision in recent days to send major U.S. naval units to the Persian Gulf.

DOMESTIC OIL PRODUCTION:

Perhaps the most immediately telling impact of Administration energy policy has been to hobble the domestic oil industry in the face of low and volatile prices. In 1985 before OPEC drove prices down, domestic oil production was 9 million barrels per day. By last December, it had dwindled by 682,000 barrels per day according to the Department of Energy. And the declining production trend accelerated over the year. As a result, production is now running below the pace set in 1981 - a giant step backward for an industruy which had succeeded in adding to proven reserves in recent years.

These low and volatile prices have caused oil industry cash flows to shrivel. In turn, budgets have had to be cut across the board. Exploration activity has been hard-hit with spending falling nearly 30 percent. Industry reinvestment levels have fallen to the lowest levels every recorded, with only 60 cents of every dollar of net production revenue being returned to exploration and development. The number of seismic crews at work in the United States declined through 1986 to a low of 155 compared with a mid-1981 peak of nearly 750 crews. Drilling was hard-hit as well. The Hughes rotary rig count plunged by more than half, for example, to average 964 last year, compared to nearly 4,000 in 1981. Total industry employment fell 20 percent just in 1986 alone to the lowest level since 1977.

But that is just the leading edge of the firestorm burning through our oil industry. Future production levels depend on exploration and R&D activity. Both areas have been plunged into a depression by declining industry cash flows. Perhaps the most telling indicator of future exploration is the drastic decline in employment of geologists. With rates as high as 35 percent in States like Colorado and Oklahoma, that occupation's unemployment rate now matches the rate in 1932 during the Depression. There are almost no oil industry engineers over the age of 55 now working due to layoffs and forced early retirements. Moreover, the number of college students in geology, geophysics and petroleum engineering has plunged from 7,000 four years ago to only 3,000 now.

This dramatic decline in the industry's exploration base is magnified by its 25 percent cut in R&D budgets last year for technologies like enhanced oil recovery. Compounding these industry budget reductions is the enormous proposed Administration cutback in the fossil fuel R&D budget of 50 percent for FY88, plus recissions totaling 25 percent in the FY87 budgets. The diminished effort implicit in these budget reductions to improve oil recovery technologies means that little improvement will occur in present recovery rates from oil reservoirs. The National Petroleum Council has found that only 16 percent of oil in reservoirs is typically recovered with primary extraction techniques. That leaves over 320 billion barrels of oil in known domestic reservoirs which can possibly be extracted if new enhanced recovery technology could be developed.

That remaining oil dwarfs our known reserves of 28 billion barrels. And the sharp decline in drilling last year makes it almost a sure bet that those reserves will show a decline for 1986 when final data is compiled later this year. Moreover, it's a sure bet that production will decline this year, with estimates of the falloff ranging from 300,000 barrels per day to 800,000 barrels per day. In light of the considerable lag between price movements and production changes, the decline in domestic oil production will certainly persist well beyond 1990 if prices were magically stabilized today.

RISING DOMESTIC DEMAND:

Consumers reacted strongly to cheap oil last year. Oil demand rose a sharp 3.3 percent or more than 500,000 barrels per day. That trend accelerated over the year. Demand in Decmeber, 1986, for example, was up over 900,000 barrels per day compared to 1985. Exacerabating this splurge was the Administration's decisions to rollback the comprehensive auto fuel efficient standards and to weaken energy conservation standards for federal buildings. Moreover, the Administration's FY88 budget proposes to slash energy conservation R&D by two-thirds, continuing its implicit policy of promoting energy demand.

RISING IMPORT DEPENDENCE:

Rising demand and falling production last year created an energy gap which could only be filled with oil from abroad. I mentioned earlier that U.S. oil dependence rose to 39 percent last year from 27 percent in 1985. That dependence will surely increase even further in the years ahead as OPEC pursues its strategy of price instability. The Library of Congress, the Congressional Budget Office and even Department of Energy officials acknowledge that our oil dependence will exceed 50 percent by 1990 or 1991.

Even more alarming, a substantial share of that imported oil will come from OPEC directly. Other non-OPEC oil sources like the United Kingdom have increased production during the eighties. But the American Petroleum Institute found that production from these sources declined slightly last year while OPEC's production increased. And some of that higher OPEC production came here. In June, 1985, for example, we imported only 26,000 barrels of oil from Saudi Arabia. But imports from that member of OPEC leaped to 664,000 barrels in January, 1986. Including all OPEC nations, OPEC now accounts for 45 percent of U.S. imports compared to 36 percent in 1985. And total U.S. dependence on OPEC rose to 17 percent last year from 12 percent in 1985.

A NEW ENERGY POLICY TO PROMOTE NATIONAL SECURITY:

We face a perilous energy future under the Administration's energy policies. Demand will continue rising, production and reserves will continue dwindling and import dependence will quickly reach record levels. Oil industry exports and outside analysts alike have grown concerned about these trends. For example, Drs. Broadman and Hogan of the Harvard University Energy and Environment Policy Center have concluded that current oil prices do not reflect the true cost of dependence on insecure foreign oil sources. Bargain basement prices now carry the substantial risk of supply disruptions in the future as oil imports soar.

Some Administration officials agree with the rising dangers posed by undue foreign oil dependence. U.S. Interior Secretary Hodel, for example, was quoted late last year saying that U.S. complacency about OPEC was putting that oligopoly "back in the driver's seat," which "constitutes some form of national security threat to the United States." But such sentiment is not widespread in the Administration.

The question is how to focus the Administration's full attention on the national security dangers posed by rising oil dependence. The Administration's energy policy and its absence of major attention to energy in the new budget are strong indicators that it does not fully appreciate these national security dangers. I believe the most effective way to focus the Administration's attention on this crisis is for Congress to adopt an energy policy which requires a careful monitoring of our energy dependence, and action by the President if that dependence becomes excessive by rising above 50 percent.

I introduced legislation to establish such an energy policy in the last Congress, entitled the "Energy Policy and Security Act." And I will be reintroducing that legislation later this session, as well. The bill is straightforward.

It establishes a national energy policy that foreign oil dependence should not exceed 50 percent of U.S. consumption. It mandates that the President must annually assess future oil trends to determine if that trigger level will be breached during the following three years. If so, he is then obligated to devise a package of production and conservation steps to prevent oil imports exceeding 50 percent of consumption. Finally, his proposed steps will be subject to congressional review.

In closing, let me add one further point. Current oil demand, production and import trends may well convince the Administration to finally initiate actions to spur production. But let me caution them that energy policy can be divisive. The Administration will need to do more than simply throw its hands in the air and leave the design of a new energy policy to Congress. It is an issue where presidential leadership is needed if we are to reverse the present dead-end energy policy which is playing into OPEC's hands.

Statement by Senator Daniel Patrick Moynihan

on

Taxation of Imported Oil

Senate Finance Subcommittee
on Energy and Agricultural Taxation
Dirksen Senate Office Building
Friday, January 30, 1987

STATEMENT OF SENATOR DANIEL PATRICK MOYNIHAN

Mr. Chairman: I very much appreciate the opportunity to express my views on the taxation of imported oil and, more broadly, the taxation of energy.

Foremost among my objections to an oil import fee is the effect such a tariff -- and let us not delude ourselves, this is most certainly a protectionist tariff -- would have on American firms attempting to compete here and abroad. Indeed, the effect is all too predictable. Oil is used, to some lesser or greater degree, in the production of almost every good and service. To tax imported oil, then, is to condemn domestic manufacturers to higher costs than are borne by their foreign competitors. In the end, American firms will find it more difficult to sell their goods both overseas and at home. The laws of economics tell us most clearly that the American consumer will seek to purchase cheaper, untaxed foreign oil in whatever form he or she can. If he cannot buy it directly, he will buy it as a component of cheaper foreign goods -- automobiles, steel and the like. The proposition, then, is simple: Unless we are prepared to protect every American industry that relies on oil, we had better not begin down that road by taxing imported oil.

Moreover, a tax on imported oil will not only impair the competitiveness of American industries, but will also hinder overall economic growth. Let's see what the numbers say about an oil import tax. According to the Consumer Federation of America, a $5 per barrel import fee would increase oil costs by about $20 billion in its first year. This in turn will lead to a 1 or 2 percent rise in inflation, a reduction in the Gross National Product of $50 billion and a loss of 500,000 jobs.

An oil import fee is, without doubt, the most inefficient type of energy tax imaginable. For every dollar raised for the Treasury, a two dollar windfall would accrue to domestic producers of oil. Surely this is bad tax policy.

An oil import fee is also the most geographically inequitable form energy of taxation. We use many different

The best energy tax -- and I am not at all sure that any energy tax is a good idea right now -- would be a gasoline tax. No tax affects all regions equally, but a gasoline tax falls more equitably across the nation -- no region would be forced to bear the kind of burden that an oil tariff would impose on the Northeast. A gas tax would not appreciably raise U.S. manufacturing costs, and our ability to compete in world markets would be unaffected. And such a tax would be far more efficient than an oil tariff: a $5/barrel tariff would collect some $7 billion per year, and raise the cost of all petroleum -- including gasoline. An $.08/gallon tax on gasoline alone would raise the same amount. And make vastly more sense.

If we are to enact an energy tax, this is the one we should do. But the political difficulty of adding substantial new gasoline taxes makes me doubt that we will do it. The next best choice is a broadly based energy tax, and that is what I shall propose.

Rather than taxing only imported oil, we should tax all oil, all natural gas and all energy from uranium. Let us leave coal and hydropower aside; these are resources we can be less concerned about. And let us exempt from this tax all residential energy use -- consumers, particularly low-income consumers, will be faced with demands enough in the years to come. They should not pay a tax to heat or cool their homes.

Were we to tax imported oil alone, only 15 percent of the nation's energy use would be taxed, although energy prices would rise across-the-board. A relatively high rate would be required to raise substantial revenue. In this proposal, more than 2/3 of domestic energy would be taxable. Even after broad rebates to exempt all residential energy use, the burden of raising the desired revenue would be spread over half the nation's energy use. Rates 1/3 as high as those suggested for oil tariffs would raise the same amount of revenue, and do so more equitably. The cost of a gallon of gasoline might rise $.03 rather than $.08.

And the price of oil, gas or electricity used to heat our homes would not rise at all.

I have substantial reservations about an oil tariff -- protectionism for part of the domestic oil industry in the guise of a revenue measure. But a serious effort to raise revenues with some broader based energy tax would be worth considering, although I must confess some reservations about the regressive effects of such a tax.

STATEMENT OF SENATOR DOLE

SUBCOMMITTEE ON ENERGY AND AGRICULTURE TAXATION

JANUARY 30, 1987

MR. CHAIRMAN:

YOU ARE TO BE CONGRATULATED FOR YOUR EARLY HEARINGS ON THE TAX ISSUES AFFECTING INDEPENDENT OIL AND GAS PRODUCERS AND THE ENERGY INDUSTRY IN GENERAL. OUR DOMESTIC INDUSTRY HAS BEEN SUFFERING FROM AN EXTENDED PERIOD OF DEPRESSED PRICES. THE EFFECT ON THE INDUSTRY, AND OUR NATION AS A WHOLE, IS A SUBJECT THAT SHOULD RECEIVE MUCH MORE ATTENTION THAN IT HAS.

IT HAS LONG BEEN MY VIEW THAT WE NEED TO TAKE SERIOUSLY THE IDEA OF A CONSISTENT NATIONAL ENERGY POLICY. IF WE HAD ONE, WE WOULD NOT BE AS CONCERNED ABOUT THE ECONOMIC STATE OF THE OIL INDUSTRY. THAT IS BECAUSE WE WOULD NEVER HAVE ALLOWED THE INDUSTRY TO GET TO SUCH A DEPRESSED CONDITION. AND WE WOULD NOT BE AS WORRIED ABOUT THE IMPACT OF CAPPED WELLS AND REDUCED EXPLORATION AND PRODUCTION ON OUR NATIONAL SECURITY BECAUSE WE WOULD NOT BE AS DEPENDENT ON FOREIGN OIL AS WE ARE TODAY.

TAXATION IS JUST ONE AREA WHICH HAS A MAJOR IMPACT ON THE ENERGY THAT WE PRODUCE, BUT IT IS VERY IMPORTANT IN ITS IMPACT. THE COST OF COMPLIANCE WITH THE WINDFALL PROFIT TAX, FOR EXAMPLE, IS EMBARRASSING CONSIDERING THAT IT RAISES NO TAX REVENUE. THE SO-CALLED "WINDFALL PROFITS" NEVER MATERIALIZED. ISSUES SUCH AS THE NET INCOME LIMITATION AND THE TRANSFERRED PROPERTY RULES MAY SEEM ARCANE TO SOME, BUT THEY MAY WELL BE THE DIFFERENCE BETWEEN WHETHER OIL WILL BE PRODUCED OR NOT.

THE MERITS AND POTENTIAL PROBLEMS OF AN IMPORT FEE ALSO DESERVE HEARING. THE ISSUE IS DEFINITELY CONTROVERSIAL, BUT THAT IS NO REASON WHY THE SENATE SHOULD NOT MAKE AN INFORMED DECISION ON IT.

AS THE CHAIRMAN KNOWS, MANY OF US IN THE SENATE HAVE ADDED OUR VOICES TO URGE CONSIDERATION OF SOME OF THE PROPOSALS THAT ARE BEING DISCUSSED TODAY. WE WORKED TOGETHER LAST YEAR TO SEE WHAT SHOULD, AND WHAT COULD, BE DONE. YOU AND I WERE JOINED BY A BIPARTISAN GROUP OF MEMBERS, INCLUDING THE DISTINGUISHED SENATORS FROM TEXAS, MR. BENTSEN AND MR. GRAMM, THE DISTINGUISHED SENATOR FROM NEW MEXICO, MR. DOMENICI, THE DISTINGUISHED JUNIOR SENATOR FROM OKLAHOMA, MR. NICKLES, MY DISTINGUISHED COLLEAGUE FROM KANSAS, MRS. KASSEBAUM, THE DISTINGUISHED SENATOR FROM LOUISIANA, MR. JOHNSTON, AND A NUMBER OF OTHERS WHO ALSO WERE CONCERNED.

UNFORTUNATELY, TAX REFORM PRECLUDED SERIOUS CONSIDERATION OF MANY OF THE ISSUES BEFORE US TODAY. THIS YEAR MAY PROVIDE A BETTER OPPORTUNITY TO RECEIVE TESTIMONY AND TO ANALYZE THE MERITS OF THESE AND SIMILAR AND RELATED PROPOSALS.

DESCRIPTION OF TAX BILLS
(S. 233, S. 255, and S. 302)

SCHEDULED FOR A HEARING

BEFORE THE

SUBCOMMITTEE ON
ENERGY AND AGRICULTURAL TAXATION

OF THE

SENATE COMMITTEE ON FINANCE

ON JANUARY 30, 1987

PREPARED BY THE STAFF

OF THE

JOINT COMMITTEE ON TAXATION

INTRODUCTION

The Senate Finance Subcommittee on Energy and Agricultural Taxation has scheduled a public hearing on January 30, 1987, on three energy-related tax bills: (1) S. 233 (relating to oil and gas income tax provisions); (2) S. 255 (repeal of the crude oil windfall profit tax); and (3) S. 302 (excise tax on imported crude oil and petroleum products).

The first part of the pamphlet [1] is a summary of the bills. The second part is a description of the bills, including present law, explanation of the bills, and related issues.

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[1] This pamphlet may be cited as follows: Joint Committee on Taxation, *Description of Tax Bills (S. 233, S. 255, and S. 302)* (JCS-1-87), January 30, 1987.

I. SUMMARY

1. S. 233—Senators Boren and Bingaman

Income Tax Amendments Related to Domestic Oil and Gas Production

This bill would provide additional income tax incentives for domestic oil and gas production. Among these, the bill would increase the percentage depletion rate if the taxpayer's average removal price for crude oil is less than $20 per barrel, repeal the 50 percent of net income limitation on percentage depletion, and allow transferred properties to qualify for percentage depletion. (A similar anti-transfer rule also would be repealed for windfall profit tax purposes.) The bill also would eliminate recapture of intangible drilling and development costs ("IDCs") and depletion upon disposition of an oil, gas or geothermal property, and treat geological and geophysical costs and surface casing costs as expensible IDCs.

These provisions generally would be effective on the date of enactment, except that the increase in the percentage depletion rate (if applicable) would be effective for calendar years beginning after 1986.

2. S. 255—Senators Boren and Bingaman

Repeal of Crude Oil Windfall Profit Tax

Present law imposes a tax (the crude oil windfall profit tax) on the windfall profit element of domestically produced crude oil. The tax is scheduled to phase out over a 33-month period beginning in January, 1991, or earlier if revenues exceed a specified amount.

The bill would repeal the crude oil windfall profit tax, effective for oil removed after the date of enactment.

3. S. 302—Senators Boren and Bingaman

Excise Tax on Imported Crude Oil and Petroleum Products

This bill would impose an excise tax on the sale or use of imported crude oil and certain products refined from imported crude oil if the average price is less than $18 per barrel for the preceding four weeks. An exception to the tax is made for imported oil held or sold for export.

II. DESCRIPTION OF THE BILLS

1. S. 233—Senators Boren and Bingaman

Income Tax Amendments Related to Domestic Oil and Gas Production

Present Law

Intangible drilling and development costs

General rules

Costs incurred by an operator to develop an oil or gas property for production are of two types: (1) intangible drilling and development costs, and (2) depreciable costs. The acquisition price for the oil- or gas-producing property, and geological and geophysical costs are recovered through depletion deductions (see discussion below).

Amounts paid or accrued to acquire tangible property ordinarily considered to have a salvage value (e.g., tools, pipe, cases, tubing, engines, etc.) are recovered through depreciation deductions. No election is permitted with respect to these costs.

Under present law, domestic intangible drilling and development costs ("IDCs") may either be currently expensed or else may be capitalized and recovered through depletion or depreciation deductions (as appropriate), at the election of the operator. In general, IDCs include expenditures by the property operator incident to and necessary for the drilling of wells and the preparation of wells for the production of oil or gas (or geothermal energy) which are neither for the purchase of tangible property nor part of the acquisition price of an interest in the property. IDCs include amounts paid for labor, fuel, repairs, hauling, supplies, etc., to clear and drain the well site, make an access road, and do such survey and geological work as is necessary to prepare for actual drilling. Other IDCs are paid or accrued by the property operator for the labor, etc., necessary to construct derricks, tanks, pipelines, and other physical structures used to drill the wells and prepare them for production. IDCs include amounts paid or accrued to drill, shoot, and clean the wells. IDCs also include amounts paid or accrued by the property operator for drilling or development work done by contractors under any form of contract.

Only persons holding an operating interest in a property are entitled to deduct IDCs. This includes an operating or working interest in any tract or parcel of oil- or gas-producing land either as a fee owner, or under a lease or any other form of contract granting working or operating rights. In general, the operating interest in an oil or gas property must bear the cost of developing and operating the property. The term operating interest does not include royalty interests or similar interests such as production payment rights or net profits interests.

Generally, if IDCs are not expensed, they can be recovered through depletion or depreciation, as appropriate. If IDCs are capitalized, costs paid or incurred with respect to a nonproductive well ("dry hole") may nonetheless be deducted as an ordinary loss, at the election of the operator, in the taxable year in which the dry hole is completed. Thus, a taxpayer has the option of capitalizing IDCs for productive wells while expensing those relating to dry holes.

Thirty-percent reduction for integrated producers

In the case of a corporation which is an integrated oil company (i.e., which is not an independent producer)[2] the allowable deduction with respect to domestic IDCs is reduced by 30 percent. (The Tax Reform Act of 1986 increased this amount from 20 percent.) The disallowed amount must be added to the basis of the property and amortized over a 60-month period, starting with the month in which the costs are paid or accrued. Amounts paid or accrued with respect to nonproductive wells (dry hole costs) are fully deductible in the taxable year in which the nonproductive well is completed.

Treatment of foreign IDCs

Under a provision added by the Tax Reform Act of 1986, IDCs incurred with respect to properties located outside the United States no longer qualify for expensing. Instead, these costs must be recovered (1) using 10-year, straight-line amortization beginning in the year paid or incurred, or (2) at the taxpayer's election, as part of the basis for purposes of any deduction allowable under section 611.[3]

Recapture

When a taxpayer disposes of an oil, gas, or geothermal property, a portion of the gain must be treated as ordinary income instead of capital gain (sec. 1254 of the Code). For property placed in service on or after January 1, 1987, the amount subject to such "recapture" is equal to the lower of (1) the amount of IDCs deducted (which, but for being deducted, would have been reflected in the adjusted basis of the property), plus depletion deductions that reduced the adjusted basis of the property, or (2) the gain on the sale, exchange, or involuntary conversion of the property.

For property placed in service before January 1, 1987,[4] the recapture amount is equal to the lower of (1) the amount of IDCs deducted since January 1, 1976 (which, but for being deducted, would have been reflected in the adjusted basis of the property), reduced by the amount (if any) by which the depletion deduction with respect to such property would have been increased if such amounts had been capitalized, or (2) the gain on the sale, exchange, or involuntary conversion of the property. Thus, for such property, IDC

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[2] These terms are defined in the same manner as for purposes of percentage depletion (discussed below).

[3] *See* discussion of depletion, below.

[4] This rule also applies to property acquired pursuant to a binding, written contract in effect on September 25, 1985. The recapture computation was amended by the Tax Reform Act of 1986.

(but not depletion) deductions are recaptured upon disposition of the property.[5]

Minimum taxes

IDC deductions on successful oil and gas wells are a tax preference item for purposes of the individual and corporate alternative minimum taxes, to the extent that the taxpayer's excess IDCs exceed 65 percent of the taxpayer's income from oil and gas properties. (Geothermal properties are treated in a similar manner.) Excess IDCs are defined generally as (1) IDC deductions (attributable to successful wells) for the taxable year, minus (2) the amount that would have been deductible in that year had the IDCs been capitalized and recovered over a 10-year, straight-line amortization period. At the election of the operator, the cost depletion method may be substituted for the 10-year amortization schedule in determining the amount of tax preference.

IDCs are not treated as tax preference items if the taxpayer elects to amortize IDCs over a 10-year period.

Depletion

General rules

Certain costs incurred prior to drilling an oil- or gas-producing property are recovered through depletion deductions. These include costs of acquiring the lease or other interest in the property, and geological and geophysical costs. Depletion is available to any person having an economic interest in a producing property (including a royalty interest).

Depletion is computed using whichever of two methods results in a higher deduction: cost depletion or percentage depletion. Under the cost depletion method, the taxpayer deducts that portion of the adjusted basis of the property which is equal to the ratio of units sold from that property during the taxable year to the number of units remaining to be recovered at the beginning of the taxable year. The amount recovered under cost depletion cannot exceed the taxpayer's basis in the property.

Under percentage depletion, 15 percent of the taxpayer's gross income from an oil- or gas-producing property is allowed as a deduction in each taxable year. The amount deducted may not exceed 50 percent of the taxable income from the property for the taxable year, computed without regard to the depletion deduction (the "net income limitation"). Additionally, the deduction for all oil and gas properties may not exceed 65 percent of the taxpayer's overall taxable income (determined before such deduction and adjusted for certain loss carrybacks and trust distributions).[6] Because percentage depletion is computed without regard to the taxpayer's basis in a property, cumulative depletion deductions may be greater than the amount expended by the taxpayer to acquire or develop the property.

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[5] Under the Tax Reform Act of 1986, the capital gain rate for individuals is conformed to the rates on ordinary income, effective in calendar year 1988. For calendar year 1987, a maximum 28-percent rate applies. The capital gain rate for corporations is 34 percent for gain recognized on or after January 1, 1987.

[6] Amounts disallowed as a result of this rule may be carried forward into later taxable years.

Limitation to independent producers, etc.

Under present law, percentage depletion for oil and gas properties is limited to independent producers and royalty owners[7] (as opposed to integrated oil companies), for up to 1,000 barrels of average daily domestic crude oil production or an equivalent amount of domestic natural gas.[8] For producers of both oil and natural gas, this limitation applies on a combined basis.[9]

For purposes of percentage depletion, an independent producer is any producer who is not a "retailer" or "refiner." A retailer is any person who directly, or through a related person, sells oil or natural gas or any product derived therefrom (1) through any retail outlet operated by the taxpayer or related person, or (2) to any person obligated to market or distribute such oil or natural gas (or product derived therefrom) under the name of the taxpayer or the related person. Bulk sales to commercial or industrial users, and bulk sales of aviation fuel to the Department of Defense, are excluded. Further, a person is not a retailer within the meaning of this provision if the combined gross receipts of that person and all related persons from the retail sale of oil, natural gas, or any product derived therefrom do not exceed $5 million for the taxable year.

A refiner is any person who directly or through a related person engages in the refining of crude oil, but only if such taxpayer or related person has a refinery run in excess of 50,000 barrels for any day during the taxable year.

To prevent proliferation of the independent producer exception, all production owned by businesses under common control, or by members of the same family, must be aggregated for purposes of these rules. Further, if an interest in a proven oil or gas property is transferred after 1974, production from such interest does not qualify for percentage depletion. Exceptions to this rule are provided in the case of transfers at death, to controlled corporations, and between controlled corporations or certain other business entities.[10]

Similar depletion rules apply to geothermal deposits located in the United States, except that the 1,000-barrel-per-day and 65 percent of taxable income limitations do not apply.

Minimum tax

Percentage depletion, to the extent that it exceeds the adjusted basis of the property, is a preference item for purposes of the individual and corporate minimum taxes.

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[7] Under a provision added by the Tax Reform Act of 1986, percentage depletion is not available for lease bonuses, advance royalties, or other amounts paid without regard to actual production from a property.

[8] As originally enacted, the depletable oil quantity was 2,000 barrels of average daily production; however, this was phased down to 1,000 barrels for 1980 and thereafter.

[9] Certain regulated natural gas, natural gas sold under a fixed contract, and natural gas from geopressured brine is exempt from the 1,000 barrel per day limitation.

[10] A similar anti-transfer rule applies for purposes of the exemption from the crude oil windfall profit tax for independent producer stripper well oil. (*See*, the discussion of the windfall profit tax under S. 255, below.)

Treatment of geological and geophysical costs and surface casing costs

Under present law, geological and geophysical expenditures for the purpose of identifying and locating productive mineral properties must be capitalized and recovered through depletion deductions. These may include expenditures for reconnaissance surveys over a broad area, and more detailed surveys within an identified area of interest. Geological and geophysical costs may be deducted as an ordinary business loss (sec. 165) if the entire area of a survey is abandoned as a potential source of mineral production.[11]

The IRS has ruled that the cost of casing (including surface and production casing) and associated equipment must be capitalized and recovered through depreciation deductions, since the casing is deemed to have a salvage value.[12] Labor and other costs of installing casing may be deducted as IDCs.

Explanation of the Bill

Increase in percentage depletion rate; repeal of net income limitation

The bill would increase the percentage depletion rate for oil and natural gas, if the taxpayer's average removal price for oil and gas sold during the calendar year is $20 per barrel or less. The amount of the increase would depend upon the average annual removal price, as shown in the following table:

If the average annual removal price during the calendar year is:	*The applicable percentage is:*
Less than $10	30 percent
$10 to $15	25 percent
$15 to $20	20 percent
Greater than $20	15 percent

The "average annual removal price" for the taxpayer would be determined by dividing the taxpayer's aggregate production of domestic crude oil or natural gas for the calendar year by the aggregate amount for which such production was sold.[13] For example, if a taxpayer sold 100,000 barrels of crude oil for an aggregate price of $1.8 million in calendar year 1988, the taxpayer's average removal price would be $18 per barrel, and a percentage depletion rate of 20 percent would apply to all production by that taxpayer in 1988. In the case of crude oil or natural gas sold between related persons, removed before sale, or refined on the production premises, a constructive sales price would be used (secs. 613 and 4988(c)).

The bill would repeal the 50 percent of net income limitation on percentage depletion deductions for oil and gas wells. Thus, percentage depletion would equal the specified percentage of gross income from each property, without regard to the net income from that property. The 65-percent taxable income limitation of present law would continue to apply.

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[11] *See*, Rev. Rul. 77-188, 1977-1 C.B. 76; Rev. Rul. 83-105, 1983-2 C.B. 51.

[12] *See* Rev. Rul. 70-414, 1970-2 C.B. 132; Rev. Rul. 78-13, 1978- 1 C.B. 63.

[13] Presumably the legislation intends that the average annual removal price be determined by dividing removal production in barrel-of-oil equivalents into the amount for which such production was sold.

Percentage depletion would continue to be limited to 1,000 barrels per day of domestic crude oil production (or an equivalent amount of natural gas) by independent producers.[14] Additionally, the limitation on percentage depletion deductions for all oil and gas properties, to 65 percent of the taxpayer's overall taxable income, would remain in effect.

Effective date.—The changes in the percentage depletion rate would be effective for production during calendar years beginning after December 31, 1986. The repeal of the net income limitation would be effective for taxable years beginning after the date of enactment.

Repeal of anti-transfer provisions

Percentage depletion.—The bill would repeal the anti-transfer provisions for purposes of the 1,000 barrel per day limitation on percentage depletion. Thus, proven oil and gas properties could be transferred to an independent producer and qualify for percentage depletion. Percentage depletion would continue to be limited to 1,000 barrels of average daily production by each transferee (including production from transferred and other properties).

Windfall profit tax.—The bill would allow transferred properties to qualify for the independent producer stripper well exemption from the crude oil windfall profit tax. Thus, oil could qualify as exempt stripper well oil, although the oil is attributable to a proven property interest that was owned by a person other than an independent producer after July 22, 1981.

Effective dates.—The repeal of the percentage depletion anti-transfer rules would be effective for production after the date of enactment, in taxable years ending after that date. The amendment to the crude oil windfall profit tax would be effective for crude oil removed after the date of enactment.

Repeal of recapture on disposition of oil, gas or geothermal property

The bill would repeal the rules providing for recapture of intangible drilling cost deductions upon disposition of an oil, gas or geothermal property (sec. 1254 of the Code). This repeal would also apply to the recapture of certain depletion deductions on property placed in service after 1986.[15]

Effective date.—This provision would be effective for dispositions of oil, gas or geothermal properties after the date of enactment.

Treatment of geological, geophysical, and surface casing costs as IDCs

Under the bill, domestic (including U.S. possessions) surface casing costs and geological and geophysical costs would be treated in the same manner as intangible drilling and development costs for tax purposes. Thus, these costs would qualify for expensing at the election of the operator, subject to a 30-percent reduction for integrated oil companies.[16]

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[14] The bill would repeal the anti-transfer provisions for purposes of this limitation (see discussion below).

[15] The bill would not affect recapture of mining exploration and development costs (secs. 617(d) and 1254).

Effective date.—This provision would be effective for costs paid or incurred after the date of enactment, in taxable years ending after that date.

Issues

Repeal of anti-transfer rules

Since 1975, the use of the percentage method for computing depletion deductions for oil and gas wells has been restricted to independent producers and royalty owners for limited amounts of crude oil and natural gas.

At the time these restrictions were enacted, Congress recognized that taxpayers would attempt to maximize the amount of oil and gas eligible for percentage depletion by transferring ownership interests. Consequently, the 1975 Act specifies that the limitation on the amount of oil and gas eligible for percentage depletion is to be computed by aggregating the production of related parties. In addition, the 1975 Act generally disallows percentage depletion with respect to transfers of proven oil and gas property.

The anti-transfer rules prevent integrated producers from indirectly obtaining the benefits of percentage depletion by selling productive oil and gas property to independents. The anti-transfer rules also prevent independent producers with less than 1,000 barrels per day of average production from buying proven reserves in order to use up their percentage depletion limitation.

An argument for repeal of the anti-transfer rules is that by expanding the amount of oil and gas eligible for percentage depletion, the tax Code will provide a more powerful incentive for production, and may prevent the abandonment of wells that otherwise would be permanently closed. Oil and gas exploration activities also would be expected to increase as a result.

An argument against repeal of the anti-transfer rules is that integrated producers would be able to benefit indirectly from percentage depletion by selling reserves to independents. Repeal of the anti-transfer rules will not encourage exploration to the extent that transferred reserves were already discovered as of the date of enactment.

Repeal of 50-percent of net income limitation

The percentage depletion deduction for an oil or gas well is computed as 15 percent of gross income from the well, but limited to 50 percent of taxable income from the property. The 50-percent limitation prevents the percentage depletion deduction from reducing the taxpayer's effective rate of tax on oil and gas income by more than one-half.

The 50-percent limitation has been criticized for causing perverse incentives. Percentage depletion actually provides the largest amount of subsidy to low cost producers, who would produce even without percentage depletion deductions, and the smallest amount of subsidy to high cost producers. This is the case because high cost producers have little or no net income from their properties.

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[16] The minimum tax rules applicable to IDCs also would apply to these costs.

Moreover, producers subject to the 50-percent limitation actually may be discouraged from engaging in exploration and development activities since the cost of such activity is, in effect, nondeductible. This situation arises because each dollar of deductible exploration expense reduces the percentage depletion deduction by a dollar for a taxpayer at the 50-percent limit.

Others argue that the 50-percent limitation should be retained to prevent oil and gas producers from sheltering all of their income from tax. The ability of certain upper income individuals to avoid paying tax as a result of percentage depletion may create perceptions of unfairness, and may reduce voluntary compliance with the tax Code. In response it is argued that the alternative minimum tax enacted in 1986 and the 65 percent of taxable income limitation on percentage depletion deductions are sufficient to prevent excessive tax avoidance.

Change in rate of percentage depletion

Under the bill, the rate of percentage depletion for oil and gas would be increased from 15 percent to 30 percent as the average annual removal price of oil falls from $20 to $10 per barrel. The effect is to increase the rate of percentage depletion when the income of domestic producers falls due to declining world oil prices.

An argument in favor of a variable rate of percentage depletion is that it would tend to stabilize the income of oil and gas producers. This provision is similar to certain farm stabilization programs which increase payments to farmers when farm income falls as a result of oversupply.

An argument against a variable rate of percentage depletion is that it would provide little or no benefit to many of the oil and gas producers hardest hit by falling petroleum prices: those producers with net operating losses. Additional depletion deductions have no immediate value to producers that have no income tax liability.

Treatment of geological, geophysical and surface casing costs

Under present law lease acquisition and geological and geophysical costs (incurred with respect to successful wells) are recovered through depletion deductions. The cost of casing (both surface and production casing) and other tangible property used in exploratory and development drilling is recovered through depreciation deductions under the general rules applicable to plant and equipment (accelerated cost recovery system). By contrast, intangible drilling costs, such as labor and materials are expensed (except for integrated producers). Under S. 233, geological and geophysical ("G&G") and surface casing costs would be eligible for the more rapid cost recovery rules applicable to intangible drilling costs.

An argument against special treatment of G&G and surface casing costs is that it would favor the oil and gas industry relative to other sectors of the economy. The rules applicable to manufacturers require that most direct and indirect costs of production be capitalized (i.e., the full absorption method). Construction companies also must capitalize most direct and indirect costs of construction. In addition, surface casing already is eligible for accelerated depreciation deductions. Expensing treatment would provide more favorable depreciation rules for oil and gas property than is available for equipment used in other industries and in agriculture.

An argument in favor of expensing G&G costs is that geological analysis and exploratory drilling are to some extent substitutable activities in the search for oil and gas properties. Present law may encourage too much drilling relative to geological investigation due to the less favorable tax treatment of G&G costs.

Repeal of recapture rule

Under the Tax Reform Act of 1986, gain from the sale of oil, gas, and geothermal property attributable to deductions for intangible drilling costs and depletion allowances are treated as ordinary income rather than capital gain. Since ordinary income and capital gains are taxed at the same rate after 1987, the effect of the recapture rule is to prevent recapture income from being sheltered by capital losses for taxpayers with net capital losses (or capital loss carryforwards).

Under the 1986 Act, the recapture rules for oil and gas property were made more similar to the rules applicable to depreciable property. Under S. 233, oil and gas property would be accorded more favorable recapture treatment than depreciable property—treatment that actually would be more beneficial to the taxpayer than the rules in existence before the 1986 Act.

As a result of the sharp decline in oil prices since 1985, many producers have incurred large capital losses on oil and gas property. Absent relief from the present recapture rule, these producers may not be able to utilize these capital losses in the near future when cashflow considerations are of great importance.

An argument against repeal of recapture for oil and gas property is that it would favor the oil and gas industry relative to other sectors of the economy such as agriculture and manufacturing.

2. S. 255—Senators Boren and Bingaman

Repeal of Crude Oil Windfall Profit Tax

Present Law

Present law imposes an excise tax (the crude oil windfall profit tax) on the windfall profit element of the price of domestically produced crude oil when it is removed from the premises on which it was produced. Generally, the windfall profit element is defined as the excess of the sale price over the sum of the adjusted base price plus the applicable State severance tax adjustment. The windfall profit element may not exceed 90 percent of net income attributable to a barrel of crude oil.

The tax rates applicable to taxable crude oil are as follows:

Category of Oil	Tax rate (percent)	Estimated Base Price [1] (dollars per barrel)
Tier-1 Oil (Oil Not in Tiers 1 or 2)		
Integrated producer	70	$18.49
Independent producer	50	19.07
Tier-2 Oil (Stripper and Petroleum Reserve Oil)		
Integrated producer	60	20.89
Independent producer	30	NA
Tier-3 Oil		
Newly discovered oil	[2] 22.5	27.59
Incremental tertiary oil	30	27.13
Heavy oil	30	23.11

[1] Estimate for fourth quarter of 1986 based on *SOI Bulletin* (Summer 1986). The estimated base price for tier-1 oil excludes North Slope oil.

[2] Phases down to 20 percent in 1988 and 15 percent in 1989 and subsequent years.

Independent producer stripper well oil is exempt from the tax. Additionally, crude oil from a qualified governmental or a qualified charitable interest, certain front-end oil, certain Indian oil, certain Alaskan oil and, in the case of qualified royalty owners, up to three barrels per day of royalty production, are exempt from the tax.

The windfall profit tax is scheduled to phase out over a 33-month period, beginning after December 31, 1987, if the cumulative revenue raised by the tax reaches $227.3 billion net of income tax offset, but in any event beginning no later than January 1991. As of September 1985, $76.7 billion of windfall profit tax had been collected (before reduction for income tax offset).

During the 99th Congress, the Senate approved legislation that would have repealed the windfall profit tax, effective October 1, 1987. The provision was an amendment to H.J. Res. 668, a bill to increase the Federal debt limit. No further action was taken on the bill.

Explanation of the Bill

The bill would repeal the crude oil windfall profit tax, effective for oil removed from the premises after the date of enactment.

Effective Date

The bill is effective for oil removed from the premises after the date of enactment.

Issues

Revenues

One of the main arguments in favor of repealing the windfall profit tax is that at present price levels, the tax raises little or no revenue yet producers must nevertheless incur the burdensome recordkeeping expenses associated with the tax. Based on the Congressional Budget Office's most recent forecast of petroleum prices, the windfall profit tax will raise little or no revenue over the next five years.

In response it is argued that the price of oil is extremely volatile and that past attempts to predict future oil prices have been fraught with error. Forecasters failed to foresee the rapid rise in petroleum prices following the October 1973 war, and the rapid fall in petroleum prices in 1986. The unpredictable nature of oil prices suggests that revenue estimates of the windfall profit tax should be viewed with caution. An unforeseen crisis in the Middle East could send the world market price of oil soaring: in this event repeal of the tax could result in a substantial revenue loss.

Effect on exploration and production

Another argument for repealing the windfall profit tax is that it discourages exploration and production of domestic oil. The windfall profit tax is in effect a sales tax on domestic crude oil which cannot be passed on by the producer since the price of petroleum is set by foreign producers who are not subject to the tax. As a result of the tax, high cost oil may not be produced, and exploration activities may be reduced. The effects of the windfall profit tax may be offset by the percentage depletion allowance which is, in effect, a tax subsidy based on sales (i.e., a negative excise tax). However, it is hard to justify a tax system which simultaneously encourages and discourages crude oil production.

In response it is argued that the windfall profit tax minimizes adverse effects on exploration and development by setting higher base prices and lower tax rates for newly discovered, incremental tertiary, heavy, and stripper well oil.

Oil price decontrol

In April of 1979, the Carter Administration announced that it would use its discretionary authority over oil prices to phase out price controls between June 1, 1979 and September 30, 1981. Members of Congress who favored price controls did not seek legislation against decontrol in return for Administration support for a tax on a portion of the profits attributable to decontrol. The Crude Oil Windfall Profit Tax Act of 1980 is a result of this compromise.

Some argue that repeal of the Crude Oil Windfall Profit Tax Act would breach the compromise reached in 1980. Others argue that the inflation-adjusted price of oil is now less than half of what it was when the Crude Oil Windfall Profit Tax Act was enacted. This change in circumstances, it is argued, justifies major change or repeal of the Act.

3. S. 302—Senators Boren and Bingaman

Excise Tax on Imported Crude Oil and Petroleum Products

Present Law

Superfund taxes

Excise taxes are imposed on petroleum and certain chemicals to fund the Hazardous Substance Response Trust Fund ("Superfund").

Petroleum tax

A tax of 8.2 cents per barrel for domestic crude oil and 11.7 cents per barrel for imported petroleum products is imposed on the receipt of crude oil at a U.S. refinery, the import of petroleum products and, if the tax has not already been paid, on the use or export of domestically produced oil.

Domestic crude oil subject to tax includes crude oil condensate and natural gasoline, but not other natural gas liquids. Taxable crude oil does not include oil used for extraction purposes on the premises from which it was produced, or synthetic petroleum (e.g., shale oil, liquids from coal, tar sands, biomass), or refined oil.

Petroleum products which are subject to tax upon import include crude oil, crude oil condensate, natural and refined gasoline, refined and residual oil, and any other hydrocarbon product derived from crude oil or natural gasoline which enters the United States in liquid form. The term "United States" is defined to mean the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, the Trust Territory of the Pacific Islands, and any possession of the United States, as well as the Outer Continental Shelf and foreign trade zones located within the United States.

The petroleum tax generally expires on December 31, 1991. The tax would terminate earlier than that date if cumulative Superfund receipts during the reauthorization period equal or exceed $6.65 billion, and under certain other conditions.

Tax on feedstock chemicals

The tax on feedstock chemicals applies to the sale or use of 42 specified organic and inorganic chemicals ("feedstock chemicals") by the manufacturer, producer, or importer. These chemicals generally are hazardous substances, or may create hazardous products (or wastes) when used. The tax rates range from 22 cents to $4.87 per ton of the chemical concerned. (A special rate applies to xylene to compensate for refunds of tax previously paid with respect to xylene).

The tax on feedstock chemicals expires on December 31, 1991, or earlier, under the same circumstances as the tax on petroleum.

Import fee authority

Under the Trade Expansion Act of 1962, the President can impose oil import fees or import quotas if he finds that imports threaten the nation's security. Congress may roll back such fees by passing a joint resolution of disapproval. However, this resolution can be vetoed by the President, in which case the fees he imposed would continue in effect unless the President's veto is overridden by a two-thirds vote of both Houses of Congress. These procedures for Congressional vetoes and overrides were specified by the Crude Oil Windfall Profit Tax Act of 1980 (P.L. 96-223).

Under an exemption from the General Agreement on Tariffs and Trade (GATT), a tariff imposed on national security grounds is not a violation of trade agreements. Consequently, enactment of a tariff on imported petroleum for legitimate national security reasons would not result in the imposition of GATT-authorized countervailing duties or other trade penalties.

The presidential import fee authority was used, to various extents, by Presidents Nixon, Ford, and Carter. President Nixon imposed import license fees of 21 cents per barrel for crude oil and 63 cents on refined products in 1973 (this differential was intended to encourage domestic refining). President Ford imposed an additional $2 per barrel crude oil import fee in 1975, but lifted the fee early in 1976. President Carter raised the possibility of an import fee in 1977 and again in 1979, in response to which Congress adopted the veto and override provisions contained in the Crude Oil Windfall Profit Tax Act. (Both the Ford import fee and the original Carter proposal were intended to encourage action on broader energy proposals.) President Carter actually imposed a $4.62 per barrel import fee in 1980, with allocation rules that effectively converted the fee into a 10-cents-per-gallon gasoline tax. However, a resolution of disapproval was passed by the Congress, and President Carter's veto of that resolution was overridden.

Tariff on imported petroleum

Tariffs are imposed on various categories of articles that are imported into the customs territory of the United States (including the 50 states, the District of Columbia, and Puerto Rico). The tariffs generally are imposed at a uniform rate for imports from most noncommunist countries, with separate, higher rates imposed on imports from certain communist nations. Preferential treatment applies to certain imports from developing countries, specified Caribbean basin nations, and Israel. Imports from U.S. insular possessions, where the imported product is not comprised primarily of foreign materials, may be made duty-free. Tariffs are imposed pursuant to the Tariff Act of 1930 (19 U.S.C. sec. 1202 *et seq.*), and generally are subject to GATT limitations.

At present, a tariff of 0.125 cent per gallon is imposed on crude petroleum, topped crude petroleum, shale oil, and distillate and residual fuel oils derived from petroleum, with low density (under 25 degrees A.P.I.). For substances with higher densities (testing 25 degrees A.P.I. or more), the tariff is 0.25 cent per gallon.[17] (Imports from certain communist countries are subject to a 0.5-cent-per-gallon tariff, regardless of density.) A 1.25-cents-per-gallon tariff (2.5 cents, for certain communist countries) also is imposed on certain motor fuels and a 0.25-cent-per-gallon tariff (0.5 cent, for certain communist countries) on petroleum-derived kerosene and napthas (except motor fuels). Natural gas, together with methane, ethane, propane, butane, and mixtures thereof may be imported tariff-free. Certain Canadian petroleum also may be admitted tariff-free, subject to an exchange agreement allowing like treatment for an equivalent amount of U.S. petroleum imported into Canada.

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[17] Degrees API equals 141.5 divided by specific gravity, less 131.5.

Explanation of the Bill

Imposition of tax

This bill would impose an excise tax on crude oil or refined petroleum products that are imported into the United States if the prices of the petroleum products are below a predetermined price (as described below). The tax would be imposed on the first sale of the crude oil or refined product within the United States; if the crude oil or refined product is used before tax has been imposed, the tax would be imposed on that use. The tax would be paid by the seller of the taxable product (or in the case of use, by the user of the product).

All crude oil (defined as including crude oil condensates and natural gasoline but not including any crude oil produced from a well located in the United States) would be subject to the tax. Refined petroleum products subject to the tax would include refined oil, fuels, and chemical feedstocks which are refined or derived from non-U.S. produced crude oil.

Amount of tax

For the above described petroleum products, the amount of tax per barrel [18] for a weekly period would equal the excess of (1) $18 over (2) the average international price of crude oil for the preceding 4-week period. The determination of the average international price of crude oil for a 4-week period would be made by the Secretary of Energy (or his delegate) and published in the Weekly Petroleum Status Report. If the average international price of crude oil for any 4-week period equals or exceeds $18, then no tax is imposed for the week immediately following the 4-week period. In the case of a fraction of a barrel, the amount of tax imposed is the same fraction of the amount that would be imposed on a whole barrel.

Exception to the tax

An exception to the tax would be provided for petroleum products that are sold for export, or for resale to a second purchaser for export. The tax would be reimposed on such transactions unless, within 6 months after the sale, the seller receives proof that the petroleum product actually has been exported. For purposes of this exception, the term "export" includes shipment to a United States possession.

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[18] A barrel is defined as 42 United States gallons.

Procedure and administration

Procedures, tax returns, and penalties with respect to the tax would be equivalent to those applicable to the crude oil windfall profit tax, except as provided by Treasury regulations where such treatment would be inappropriate.[19] Persons subject to the tax also would be required to register with the Treasury Department at such time and in such manner as the Secretary may prescribe. (As indicated in footnote 19, below, excise taxes normally are collected on a quarterly basis. As the tax under this bill would be imposed on a weekly basis, regulations would have to be issued to coordinate this tax with excise tax requirements in general.)

Deductibility against income tax

The tax imposed by the bill would be fully deductible against Federal income taxes.

Effective Date

The provisions of the bill would apply with respect to sales of imported crude oil and refined petroleum products in calendar quarters beginning more than 30 days after the date of enactment of this Act. It is unclear whether imported oil which has been sold in the United States before the effective date but which is held in inventory for resale or is not otherwise subject to use until after the effective date would be subject to the tax.

Issues

a. Energy policy

In general

A tax on the sale or use of imported petroleum is economically equivalent to an increase in petroleum tariffs. Both would raise the domestic price of petroleum above the world market price by the amount of the tax or tariff.[20] This would influence both the domestic demand and supply for petroleum.

Domestic consumers confronted with higher petroleum prices will over time reduce petroleum consumption. Demand reduction will occur as consumers shift to alternative fuels, improve energy efficiency, and curtail consumption of goods and services produced from petroleum.

A higher domestic oil price will increase profits of domestic producers and boost production of petroleum and petroleum substitutes (such as natural gas and synthetic fuels).

Both the supply and demand effects of an oil import tax would reduce the share of petroleum imports in the domestic market.

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[19] Except as otherwise provided in regulations, the windfall profit tax is required to be withheld by the first purchaser of domestic crude oil from the price paid for the oil; if withholding is not required, the tax is paid by the seller. The purchaser also may elect to have the operator assume its responsibilities under certain cases. Returns are filed on a quarterly basis, with semimonthly deposits being required for major refiners and retailers and monthly deposits (not later than 45 days after the close of the month) for most other purchasers.

[20] At a sufficiently high tariff rate, imports would be eliminated and the domestic price of petroleum might rise by less than the full amount of the tariff.

Energy security

The sharp increases in the world price of oil in 1973-74 and 1979-80 have raised concerns about the vulnerability of the U.S. economy to world oil market shocks. Some argue for a tax on imported petroleum to reduce import dependence.

Others argue that reducing the share of imports in the U.S. petroleum market will not necessarily reduce U.S. vulnerability to oil price shocks. Since oil is traded in a world market, a shortage which pushes up the world price immediately increases domestic price. Price controls, such as existed before 1980, can be used to dampen price shocks; however, shortages may arise. As an alternative, the Strategic Petroleum Reserve (SPR), which now contains a 100-day supply of imports, could be used to drive down the price of petroleum in the event of a world shortage.

Since petroleum reserves are finite, policies which encourage substitution of domestic for imported petroleum may reduce import dependence in the near-term, while increasing dependence in the future.

High cost producers

Some attribute the precipitous decline in the price of oil in 1986 to an intentional flooding of the world market by Saudi Arabia and other OPEC members. It is argued that OPEC intends to drive high cost producers, such as tertiary recovery and heavy oil producers, out of the market. This might allow OPEC to raise prices sharply in the future.

An oil import tax could be used to protect high cost domestic petroleum producers from the decline in world oil prices. However, this approach would be expensive for consumers since both high and low cost producers would be subsidized by an import tax. A less costly alternative would be to target financial assistance to high cost producers, although this would be complex to administer.

Government intervention in the oil market may be unnecessary if the market anticipates a rebound in the world market price of oil. If this is anticipated, then high cost producers may retain production capability until prices rise, or their reserves may be sold to investors who anticipate a future price increase.

Energy market stability

S. 302 would stabilize the domestic price of oil at a floor of $18 per barrel by taxing imports by the excess of $18 over the world market price. This would in effect provide a "parity" price of $18 per barrel for oil, much like the price supports for certain agricultural commodities. Oil price support proposals are motivated in part by a desire to avoid the costs to the economy of rapid swings in the world market price of petroleum. Sharp price increases in the past have caused economic recessions and inflation, while the rapid price drop last year has caused an exodus of skilled labor and capital from the oil and gas industry.

A side effect of a variable import tax is that it would tend to destabilize the world petroleum market. This type of tax raises the domestic price of petroleum—encouraging production and discouraging consumption—just when there is a glut in the world market.

This adds further downward pressure on the world market price during periods when it already is depressed. The more the world market price falls, the larger the import tax, which causes the world market price to fall further. Such a destabilizing policy might have adverse foreign policy repercussions, and could make it more difficult for the major petroleum consuming countries to coordinate energy policy.

b. Industry impacts

Industrial use of petroleum products

Industrial customers accounted for over 25 percent of petroleum use in the United States in 1984. A petroleum import tax would increase production costs for industries that use petroleum products as fuels or feedstocks. Industries that use natural gas also would confront higher production costs to the extent that the price of natural gas rises in response to a tax on petroleum. In addition, manufacturers that use materials (e.g., plastics) and services (e.g., electricity) produced from petroleum would experience increased production costs. These cost increases are part of the way in which a tax on imported oil encourages conservation.

An oil import tax would reduce the competitiveness of energy intensive industries that compete with foreign producers in the United States or in foreign markets. Since foreign manufacturers who use petroleum or petroleum products do not pay the import tax they have an advantage over domestic manufacturers. Similarly, U.S. export goods made from petroleum or petroleum products are disadvantaged relative to foreign-produced goods.

The effect of a $5 per barrel petroleum import tax on the manufacturing sector can be estimated from the energy intensity of domestic industries. A $5 per barrel tax is chosen for the sake of example only: at present market prices, the tax imposed by S. 302 would be much less than this amount. Table 1 shows the quantity of petroleum products directly consumed in the major industry groups relative to the value of shipments. The industries with the most intensive use of petroleum products are: paper; stone, clay, and glass; chemicals; and primary metals. The tax burden imposed by a $5 per barrel petroleum tax as a percent of the value of shipments is: 0.4 percent in paper; 0.1 percent in stone, clay, and glass; 0.1 percent in chemicals; and 0.08 percent in primary metals. These estimates understate the total burden since indirect petroleum consumption (e.g., electricity), and the effect of a petroleum tax on competing fuels (e.g., natural gas) is not taken into account.

Table 1.—Industrial Use of Petroleum Products, 1980

Industry group	Petroleum products used (Trillion Btu)	Value of shipments (Billion dollars)	Petroleum use per dollar of shipments (Btu/$)	Import tax as a percent of shipments (%)
Food and kindred products	108.3	256.2	422.9	0.03
Tobacco products	2.8	12.2	232.0	0.02
Textile mill products	42.3	47.3	896.0	0.07
Apparel and textile products	3.7	45.8	81.5	0.01
Lumber and wood products	29.9	47.1	634.3	0.05
Furniture and fixtures	48	22.3	216.5	0.02
Paper and allied products	366.7	72.8	5,037.0	0.40
Printing and publishing	6.0	69.5	86.2	0.01
Chemical and allied products	193.7	162.5	1,192.1	0.10
Petroleum and coal products	59.7	198.7	300.5	0.02
Rubber and plastic products	28.3	47.3	597.4	0.05
Leather and leather products	4.5	9.8	462.3	0.04
Stone, clay and glass	56.3	46.1	1,220.6	0.10
Primary metal industries	136.6	133.9	1,020.0	0.08
Fabricated metal products	26.0	116.2	223.5	0.02
Machinery, except electrical	23.4	180.7	129.6	0.01
Electric equipment	18.3	128.6	142.4	0.01
Transportation equipment	35.4	186.5	189.9	0.02
Instruments, related products	8.4	44.1	190.8	0.02
Miscellaneous manufacturing	5.4	25.0	217.8	0.02
Total, all industries	1,160.7	1,852.7	626.5	0.05

Source: U.S. Bureau of the Census, *Census of Manufacturing*, 1982.

Increasing the Federal excise tax on gasoline and diesel fuels has been suggested as an alternative to a petroleum import tax because it has a smaller impact on international competitiveness.

Petroleum refining

A tax on imported crude oil would increase refiner acquisition costs above the world market price, which would reduce the export competitiveness of U.S. refiners. Profits from exports of refined products would be reduced unless domestic refiners are compensated for higher petroleum acquisition costs.

Banking

The decline in the world market price of oil has reduced the value of oil industry assets and the value of land located in oil producing regions of the countries. Loans based on the value of oil industry assets are threatened by the recent decline in petroleum prices. As a result, banks and savings and loan institutions with large portfolios of energy-related loans may be confronted with reduced income and possible insolvency. One argument for a tax on imported oil is that it would reduce the failure rate of banks with significant domestic energy loans. This would reduce Federal government outlays to the extent that these lending institutions are Federally insured.

Others argue that present law addresses the problem of bank failures at a lower cost to taxpayers than would be the case under an oil import tax. Under present law, Federal expenditures are targeted to financially troubled lending institutions. An oil import tax would benefit all lending institutions with domestic energy loans, regardless of risk of loss or insolvency, and the cost would in large part be borne by energy consumers.

A number of U.S. banks have made large loans to Mexico, Venezuela, and other oil exporting countries. A tax on imported petroleum could reduce the ability of oil exporting countries to service their debts to U.S. banks. A petroleum import tax would harm banks with loans to oil exporting countries while helping banks with domestic energy loans. Thus, a tax on imported petroleum may not be beneficial to the U.S. banking industry as a whole.

c. Income distribution of tax burden

A tax on imported petroleum may be passed through to individuals in the form of (1) higher prices for products manufactured from petroleum, (2) lower wages paid by petroleum-using firms, (3) reduced dividends and distributions from petroleum-using firms, and (4) higher wage, dividend, and royalty income from petroleum production and related activities. Since petroleum is used in virtually all sectors of the economy, it is difficult if not impossible to trace the full effect of a tax on imported petroleum on prices. Moreover, a tax on imported petroleum may result in higher prices of petroleum substitutes such as natural gas. These price increases also redistribute domestic income.

One way to analyze the distributional impact of a petroleum tax is to limit consideration to direct household consumption of refined petroleum products. Table 2 shows that low-income households spend a much larger portion of income on refined products than high-income households. Households with income below $5,000 in 1980-81 spent 52.8 percent of income on refined products, while households with income over $50,000 devoted only 3.1 percent of income to refined products As a result of this consumption pattern, the burden of a $5 per barrel tax on petroleum would fall relatively more heavily on low income households. Such a tax would amount to a 5.0-percent tax on the income of households in the below-$5,000 income class, compared to a 0.3-percent tax on the income of households in the above-$50,000 income class.[21]

Table 2.—Income Distribution of Petroleum Consumption, 1980-1981

Income class (dollars)	Household petroleum [1] expenditures as a percent of income (percent)	Household petroleum consumption per dollar of income (Btu/dollar)	Import tax [2] as percent of income (percent)
0-5,000	52.8	53,001	5.0
5-10,000	11.5	11,454	1.1
10-20,000	8.8	8,720	0.8
20-30,000	6.9	6,802	0.6
30-40,000	5.8	5,742	0.5
40-50,000	4.8	4,777	0.5
50,000 +	3.1	3,034	0.3
Total	7.9	7,840	0.7

[1] Includes home heating oil, liquefied petroleum gas, gasoline, diesel fuel, kerosene, and motor oil.

[2] Assumes $5 per barrel tax on imported crude oil and refined products with no exemptions.

Source: U.S. Bureau of the Census, *Consumer Expenditure Survey.*

d. Regional impacts

A tax on imported petroleum would have varying effects on regional income as a result of differences in petroleum production and consumption in different parts of the country. Regions that derive most of their energy from coal and nuclear power would benefit relative to regions that are dependent on petroleum. Petroleum producing areas of the country generally would benefit relative to areas without petroleum reserves. However, to the extent that shareholders of petroleum companies reside outside of producing regions, some of the benefits of higher oil prices could accrue in energy-consuming regions of the country. The adverse effect of an oil import tax on the competitiveness of petroleum-intensive manufacturers would be felt by the owners and employees of these companies in all regions of the country.

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[21] This analysis considers only direct petroleum consumption by households and assumes that a petroleum tax is passed through to consumers in the form of higher prices for refined products.

One way to assess the regional impact of an oil import tax is to compare the consumption of petroleum products in different regions of the country.[22]

Table 3.—Regional Distribution of Petroleum Consumption,[1] 1983

[Thousand Btu's per dollar of personal income] [2]

Region [3]	Residential	Transportation	Industrial and commercial	Total
New England	1.6	4.9	4.4	10.9
Middle Atlantic	0.9	4.7	3.2	8.8
Eastern North Central	0.4	5.6	2.7	8.7
Western North Central	0.7	7.3	3.5	11.4
South Atlantic	0.5	7.5	2.8	10.7
Eastern South Central	0.3	9.1	3.2	12.6
Western South Central	0.2	9.9	10.2	20.2
Mountain	0.3	8.3	3.0	11.6
Pacific Coast	0.1	7.1	2.1	9.3
U.S. average	0.5	6.8	3.7	11.0

[1] Includes road oil, aviation gas, distillate fuel, kerosene, liquified petroleum gas, lubricants, motor gasoline, residual fuel, and other petroleum products.

[2] Personal income is defined as income from all sources before tax, excluding military employees stationed abroad.

[3] New England includes CT, ME, MA, NH, RI, VT; Middle Atlantic includes NJ, NY, PA; Eastern North Central includes IL, IN, MI, OH, WI; Western North Central includes IA, KS, MN, MO, NE, ND, SD; South Atlantic includes DE, FL, GA, MD, DC, NC, SC, VA, WV; Eastern South Central includes AL, KY, MS, TN; Western South Central includes AR, LA, OK, TX; Mountain includes AZ, CO, ID, MT, NV, NM, UT, WY; and Pacific Coast includes CA, OR, WA

Source: U.S. Dept. of Energy, Energy Information Agency, *State Energy Data Survey*, 1983

Table 3 shows that the high rate of petroleum consumption in the southwest is due to transportation and industrial use of petroleum, rather than residential use. Residential petroleum consumption is less than half the national average in the west south central and pacific coast states, and more than three times the national average in New England. This is due primarily to the greater consumption of home heating oil in the northeastern region of the United States. Consequently, an oil import tax would have a larger impact on residential consumers in the northeast compared to consumers in the southwest.

In contrast to residential petroleum use, industrial and commercial use of petroleum is three times the national average in the southwestern states. Transportation use of petroleum, primarily gasoline, is almost 50 percent above the national average in the southwest versus 30 percent below average in New England and the middle Atlantic States.

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[22] This analysis assumes implicitly that the burden of a petroleum tax on an industrial user falls in the region of the country where the use occurs. Also, this analysis does not take into account the effect of higher petroleum prices on the income from petroleum producing and related activities, nor the effect on prices of competing fuels such as natural gas. For a discussion of issues involved in modeling regional effects of energy price changes see: Joeseph P. Kalt and Robert A. Leone, "A Model of Regional Income Accrual Under Energy Price Decontrol," Harvard Institute for Economic Research, Discussion Paper 1041 (February 1984).

While the oil-producing States would benefit substantially from higher oil prices, the data in Table 3 show that part of this benefit is likely to be offset because these States spend a much higher proportion of personal income on petroleum products. To determine the net regional effect of a petroleum import tax requires tracing the increase in oil-related income to the ultimate recipients of this income, and tracing the increase in the price of products derived from petroleum to the consumers of these products.

e. International relations

The effect of a tax on petroleum imports would be to raise the domestic price of petroleum relative to the world market price. This relative price shift occurs either because the domestic price of petroleum increases, or because the world market price falls. In the former case, the tax merely distributes income from domestic consumers to domestic producers and the government. In the latter case, the tariff has no affect on the domestic market; instead, the effect of the tariff is to transfer wealth from countries that are net petroleum exporters to countries that are net importers, such as the United States.

An importing country may be able to shift the burden of an import tax to exporting countries in situations where it consumes a large portion of world production, and its demand for the product is relatively sensitive to price changes. Some argue that a U.S. tax on imported oil is desirable because a portion of the tax would in effect be paid by exporting countries in the form of a reduced world market price of oil. Importers such as Japan and Europe would benefit from a decline in the world price of oil resulting from a U.S. import tax.

To the extent that a U.S. import tax lowers the world market price of petroleum, countries that are net petroleum exporters would experience a decline in export income. This could reduce the ability of countries such as Mexico and Venezuela to service their debts to U.S. banks, and strain U.S. relations with these countries and other oil exporting allies.

f. Revenue issues

An oil import tax has been advocated by some as a desirable source of revenue to reduce the Federal budget deficit. However, S. 302 would impose a floating rate of tax on imported petroleum, depending on the world price of oil, rather than a specific dollar amount of tax per barrel. Thus, the amount of revenue raised would depend on the future price of oil in the world market. Given the tremendous uncertainty about the future course of world oil prices, any revenue estimate must be viewed as subject to a large margin of error. If Congress wishes to use a petroleum import tax to achieve a specific revenue target, the rate of tax probably should be set equal to a fixed amount per barrel to avoid revenue fluctuations due to unanticipated swings in the world price of petroleum.

Another criticism of using an oil import tax as a revenue raiser is that such a tax would raise the price of oil to all consumers, but tax would only be collected on 40 percent of petroleum consumed—the amount that is imported.[23] Thus it is argued that a tax on petroleum designed to raise revenue should be imposed on both domestic and imported oil.

g. Tax administration

Under S. 302, the rate of tax on imported oil would be adjusted on a weekly basis, based on the average international price of crude oil in the preceding four-week period. The potentially frequent change in tax rate could cause administrative difficulties as well as tax avoidance. For example, a refiner may delay withdrawals from crude oil inventory if it is clear that the rate of tax in the next week will be less than the prevailing tax rate. Similarly, refinery runs might be accelerated during weeks in which the tax rate dips temporarily. Tax motivated shifting in refinery production could interfere with operating efficiency. Also, it may be difficult for the IRS to determine the week in which oil is used, and whether previously taxed versus untaxed oil is consumed at any point in time.

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[23] The price of natural gas and other petroleum substitutes also would increase.

Senator **Boren**. The hearing will come to order.

We are here today to discuss the status of the domestic energy industry and its implications for our future ability to produce.

Testimony today will show that over the past 18 months domestic production of crude oil has dropped significantly, while imports of foreign oil have increased dramatically. What we do during the 100th Congress to address these problems will have a profound impact well into the next century. We can choose to solve these problems and diffuse the single most volatile segment of our economy, or we can refuse to act and subject ourselves to the vagaries of the market, manipulated by foreign producers and leaders.

The handwriting is on the wall: The rig count has reached a level of 4700 in the recent past, and it currently is at approximately 860. Students in the major schools of petroleum engineering and geology, who numbered 7000 in 1982, have dropped to 3000 by 1986. And imports, which in July of 1985 were 24 percent of our national needs, have increased as of this moment to well over 40 percent, headed toward the 50-percent figure. For example, in July of 1985 we were importing only 45,000 barrels per day from Saudi Arabia; we are now importing over 650,000 barrels per day from Saudi Arabia. So, the handwriting is on the wall.

We see a situation where the domestic industry, particularly the independent sector, is being dismantled, and our national security is being imperiled by increasing our dependence on overseas sources of energy that should be produced here at home. This is a development that will leave our consumers at the mercy of foreign producers in the future, at any prices that those producers might chose to charge.

I have introduced the three bills that we are using as a starting point for today's hearing. I offer them as examples of solutions available to us. Several of my colleagues have also introduced legislation that seeks to address the problems facing the domestic industry; including, of course, the distinguished Chairman of the Finance Committee, Senator Bentsen. I would enter into the record at this point a statement by the distinguished Chairman about the situation which we face.

Whatever action we take, we must first try to build a consensus. These problems can only be solved by truly bipartisan effort.

S. 233 attempts to improve the cash flow of domestic producers and to prevent premature abandonment of existing marginal production, per changes in the existing Tax Code.

One, it repeals the transfer rule. Current law provides that when an independent producer buys proven producing property from an integrated major company, that property is not eligible for windfall profit tax exemptions or percentage depletion. Repeal of the transfer rule would allow independents to benefit from percentage depletion and any windfall profits tax exemption that may exist. This would benefit both integrated companies, by encouraging them to sell uneconomic properties rather than abandoning them, and provide additional incentives to independents to purchase and to continue to produce these properties.

Second, it repeals the 50 percent of net income limitation. Current law provides that the percentage depletion deduction is limited to not more than 50 percent of the net income of the eligible producing property. Repeal of this section would stimulate additional cash flow to those producers who still have income-producing properties.

One of the problems, of course, that we have now is that, at the time that you most need the depletion, the property may not have income with which to offset the depletion advantage, and so you lose the depletion when you most need it, when a property is not making money.

Third, change the rate of percentage depletion. Current law provides for a 15 percent rate for percentage depletion. Increasing the rate would serve to increase cash flow for eligible independent producers—again, assuming that the property is producing a net income.

To spread the benefit of such a change, the definition of "eligible producer" would be expanded to include all producers and mineral owners of marginal properties—stripper wells, tertiary, and high costs to the projects. This change would encourage the integrated producers to maintain their stripper production and not abandon these marginal wells, waste this precious resource for our people, for which the environmental and economic costs have already been paid by American consumers.

I have suggested a sliding scale for percentage depletion, ranging from a 30 percent depletion rate, when oil reaches the price of $10, to the current 15 percent when oil reaches the price of $20.

Fourth, permit the expensing of geological and geophysical costs. These costs of searching and testing for oil are capitalized under present law; however, they are ordinary and necessary costs of doing business, which arguably should be deducted when incurred. If these costs are deductible, the cost of exploration would be reduced and paperwork burdens would be reduced.

Fifth, repeal of the IDC recapture rule. Under current law, the gain on the sale of a producing property is characterized as ordinary income to the extent of any intangible drilling costs previously taken. By repealing this provision, the basis used to calculate gain on the sale of a property will not be reduced, and consequently the gain will be smaller, as will taxes paid on that gain. This should help to generate some additional cash flow that is so badly needed during the time of this depression that we are now facing in the domestic energy sector.

S. 295 attempts to correct one of the worst inequities ever placed upon the American industry through the tax laws, by repealing the windfall profits tax. At the present price levels, the tax raises no revenue; and yet, producers are nevertheless incurring burdensome paperwork and recordkeeping expenses. Even the Congressional Budget Office projects the tax will raise little or no revenue over the next five years, and there is absolutely no excuse for costing the private sector hundreds of millions of dollars when absolutely no benefit is produced to the Government of the United States or to the Treasury.

S. 302 attempts to stabilize the price of domestic crude oil by placing an excise tax on all foreign crude oil and refined petroleum products that is priced below the level of $18 per barrel.

I introduced my first proposal, an import fee, in July 1985, and I am still convinced that a properly crafted import fee is perhaps the quickest way to provide stability for our domestic industry, and also to provide stability for the financial system as well. There are billions of dollars of loans by financial institutions secured by the value of oil and gas reserves in the ground.

It is clear that oil pricing has become much like the pricing of any other commodity, fluctuating over a wide range in a very short period of time.

Financial institutions, especially those in the energy-producing states which are now hard-pressed, simply have had to cut off credit to the independent sector, because they are not able to make loans when the future price range of oil reserves is so unstable.

Therefore, we must find a way to put a floor, to bring some sort of stability back to oil prices so that the much needed flow of credit can again begin to move, so that we can preserve the domestic sector.

We are really facing here the restructuring of the industry if we don't do something about it. Those companies that are large, that can generate their own capital, can perhaps survive during this period. The smaller companies, that have to seek financing elsewhere, simply will not be able to obtain it until we get some stability back into the pricing of oil.

I am very pleased that we have so many outstanding witnesses that will be sharing their testimony with us this morning, and I am especially pleased that several of my colleagues from the Senate have joined us this morning.

Our first witness this morning will be a colleague who is a member of this committee, one of the most thoughtful members of the Senate. We are very pleased to have him with us this morning, the Senator from Rhode Island, Senator Chafee.

Senator **Chafee**. Thank you very much, Mr. Chairman. I appreciate the opportunity to testify here today.

First, let me state that my remarks are totally going to be devoted to the oil import fee. I want to say that I am concerned about the state of the oil industry. I think the statistics you pointed out on the decline in the number of rigs are alarming to all Americans, and the ramifications are far beyond just directly the operation of the rig; it goes into the fabrication of the rigs and the whole series of other factors.

With regard to your other proposals, such as dealing with the windfall profits tax, the depletion allowances, and some of those problems that you mentioned earlier in your testimony, I would be anxious to work with you and see what we could do. But my remarks this morning, and my opposition, is devoted to the oil import fee, a matter in which you and I and others have discussed on the floor, and Senator Nickles and Senator Bingham and others have discussed many times.

I do want to stress that this oil import fee is really extremely bad for my State of Rhode Island and for the section of the country from which I come.

Now, why do I say this? For two reasons:

We view this as a very unfair proposal. Although we—I am talking about New England now, and everything I say of course pertains to my own State of Rhode Island—we lead the nation in energy conservation; but we still depend on oil for 66 percent of our energy needs, a figure which is nearly double the national average.

Now, because an oil import fee would raise the cost of all imported petroleum products, it would deal a severe blow to the homeowners and to the businessmen of my state.

Our state is a little different from the rest of the nation: The average citizen of my state now pays over $1000 a year to heat a home with oil, while a homeowner in Ohio typically pays about $800 a year to heat his home with natural gas.

Now, I don't know what this proposal would be for an oil import fee; we have different figures kicked around—$10, and $50. But a $10 oil import fee would raise a Rhode Islander's annual fuel bill by about $240, and we feel this is extremely unfair to New Englanders and to Rhode Islanders especially, to bear the brunt of these higher costs for this basic commodity.

That is the homeowner. Now let us look at the business side of it. An oil import fee is unfair to business as well as to homeowners. Maintaining artificially high domestic energy costs through an import fee would erase any competitive advantage our recovering industries have gained in the last few years.

You are familiar with our section of the country, I know, Mr. Chairman. We have traditionally been a high unemployment area; we have always been dragging behind the rest of the nation as regards prosperity. Things have changed now. I don't quite know why, but we have very, very low unemployment rates in practically all of the New England States—New Hampshire, Rhode Island, Massachusetts—and for once we seem to be going along pretty well. And we believe that imposing an oil import fee would erase any competitive advantage our recovering industries have gained over foreign imports and foreign products over the last several years.

We are fighting our way out of this recession; we are not home free yet. Many industries, as you know, in our section of the country, and across the nation, manufacturing industries, are still struggling, and the foreign competition gets more difficult every day.

I just don't think we want to compound our trade problems with an oil import fee.

So, that is the first part, the unfairness. Now, the second I would like to address is the inefficiency of this as a form of raising revenue.

I appreciate that you are not going at this to raise revenue. That is an incidental factor, but we are trying to help the industry. But if you look at the fee, of course the purpose of it is to raise all oil prices across the nation. It isn't just to raise the prices of the domestic imports. Whatever you set it at, and cause the foreign oil to rise to a certain price, the domestic will be right behind it, will be right with it. And with a $10-per-barrel import fee, U.S. consumers would pay approximately $70 billion more each year in additional energy cost, but the Federal Government would collect less than $20 billion in additional taxes.

It just doesn't seem like a very efficient way to proceed, to raise the costs for everybody like that and have the government get so little from it.

Now, as you know, Mr. Chairman, when we have had economists come before us, we have asked this question: What do you think of an oil import fee as regards the economy of the nation?

The National Association of Business Economists is opposed to the fee. I personally asked four economists who sat right here at this desk—Martin Feldstein, Charles Schultz, Normal Turee, and Alan Howerbach—when they appeared here about the fee. As you know, getting economists to agree on anything is practically impossible, but they all agreed that an oil import fee would be bad economic policy, and they just eschewed it.

The Federal Reserve Chairman, Paul Volcker, has also stated that he opposes an oil import fee.

Now, unfortunately, Senator Mitchell could not be here today, and as you know he has very strong views on this. He asked if I would be good enough to convey to you that he remains firmly committed against any import fee. And I would just like to cite one statistic that he uses when he speaks on this:

He noted that the poorest one-fifth of Americans spend four times as much of their income on energy as the wealthiest one-fifth, when measured on a percentage basis. And to impose additional costs on those low wage earners would be unfair.

Finally, Mr. Chairman, it seems to me that we have been around this track so many times. You know how many times we have voted on it. Senator Nickles has made frequent proposals on this. We voted, as I can recall, certainly four times on this on the Senate floor, and maybe more, and the results have been rather overwhelming.

So I would like to proceed by just setting that behind us and going on to something else. I would find that very reassuring.

Thank you, Mr. Chairman.

Senator Boren. Thank you very much, Senator Chafee.

I will share with my colleagues here that on most matters, like education and other areas of policy, Senator Chafee is a man of great insight. [Laughter]

I keep bringing this back, and I would say to the Senator from Rhode Island again and again that I am hoping we will vote on it a few more times, because, you know, in our part of the country, given our theological outlook and the old-fashioned Baptist background, you know, you always sing that hymn's last verse one more time, hoping that someone will finally see the light.

So I just don't want to deprive the Senator from Rhode Island of that last effort at salvation on this matter. [Laughter.]

But seriously, let me just ask one or two brief questions.

I think that maybe one point on which you and I would agree is that it is not really healthy for the country to have an escalating dependence on foreign sources of energy. We know that at the time of the embargo we were in the high 40's in terms of our dependence on foreign sources, and obviously the consumer ended up paying for it in two ways: a lot of inconvenience with disruption in supply, and much higher prices during that period.

If we find ourselves moving back toward that range again, the Senator from Texas had legislation, you might recall, last fall that said that if we were approaching 50 percent, the President would be mandated to come up with some sort of plan that would reduce our dependence on foreign sources.

What would be your thoughts about how we could do that if we attempted to find some other route to do it, other than an import fee?

Senator CHAFEE. Well, Mr. Chairman, I think we have got a difficult situation here. It seems to me we have got to bear in mind that, if we impose some kind of a fee, that we are raising our prices, and oil or energy is a very important cost of production. And whereas we might be helping an industry, the question is: What are we doing to the rest of the industry that is competing against nations that are buying the product at a lower cost?

You know better than I the multitude of industries that are directly dependent upon oil for their products—all of the petrochemicals and so forth. So, we have got to have that balance.

Really, the question is, I think, our country being able to respond adequately to excessive increases in prices, so that then we can produce to compete, as we did in the Seventies.

But I think we really have got to ask ourselves, "Should we step in because the number of rigs has declined, as you have pointed out, and artificially boost or assist an industry because we are getting up to 50, 40, 60, whatever it is?" I mean, what is so magic about that? And indeed, I suppose one strong argument could be made that the imports mean that we are not using up our own oil.

Now, I think your point about the strippers is a good one. As I understand it, if you shut down a stripper you can't turn on the faucet when the price goes up adequately. That is a separate, more severe problem that I am not sure of the solution of.

Senator BOREN. Well, I appreciate your comments. Again, I hope that we can do some more thinking about it, because certainly there must be some point at which it becomes unhealthy for the country, at some level of imports, to have the dependency.

Because again, as you mentioned about the strippers, they really are just gone. Unless prices were to go to some astronomical, unforeseen level, you can't simply afford to go back and in essence redrill a well that is only going to make two or three barrels a day.

But supposing we did get to the 60 or 70 percent level as a lead time—in other words, when your geology schools are down, your supply and service companies are out of business—you almost have to go back and recreate, particularly in the independent sector of the industry, and it would take some lead time.

Senator CHAFEE. Well, Mr. Chairman, first I want to commend you for having these hearings. I think it is the first time that this matter has been gone into in some depth. There are obviously people in this audience that know a lot more about this subject than I do, and I think we can all benefit, not just those of you who are from the states most directly affected—you and Senator Nickles and Senator Bingaman and others. I think we all can, because this is obviously a matter of concern to all of us.

And I appreciate your concern about my redemption. [Laughter.]

As a matter of fact, I was thinking this morning about you, Mr. Chairman, and thinking as a man of your extreme intelligence, how could you stray onto this particular path with the import fee? And it was a prayerful thought. [Laughter.]

Senator **Boren**. I appreciate those sincere concerns, and, as always, I appreciate the thoughts of the Senator from Rhode Island.

We are going to have to approach this, obviously, on far more than a regional basis, and the thoughts you have shared with us this morning we certainly appreciate. We take them into account very sincerely, and we look forward to all of us working together to try to come up with the right formula in approaching this problem.

Senator **Chafee**. Thank you. I am glad you are doing this.

Senator **Boren**. Thank you very much for appearing here this morning.

[The prepared written statement of Senator Chafee follows:]

Senator **Boren**. We have also a few others of our colleagues here with us this morning: Senator Bingaman from New Mexico comes from a state where the impact of falling domestic prices, especially on the independent sector, has been severe, and the impact on the economy. Again, he is a person who has contributed already very significantly to the debate about national energy policy.

Senator Bingaman, we would be happy for you to share any thoughts you might have at this time.

STATEMENT OF THE HONORABLE JEFF BINGAMAN, U.S. SENATOR FROM THE STATE OF NEW MEXICO

Senator **Bingaman**. Mr. Chairman, thank you very much. I think it is important that we are having this hearing. Let me make just a couple of comments; I do not want to delay for long the testimony from the experts that you have assembled today, and I do commend you for having these hearings.

I guess I am struck by Senator Chafee's comment about a prayerful thought for you this morning. Prayerful thoughts are about all we are doing for this problem here in Washington.

Secretary Schlesinger testified to the Energy Committee the other day, and I thought he made a very good point. He said we do have a national energy policy, and it is a de facto energy policy which can be called "growing energy dependence." I think that is a good context in which to see the problem.

I was also struck yesterday—I am fortunate enough to be recently appointed to the Joint Economic Committee, and we got the economic report of the President yesterday, and Dr. Sprinkle testified in that report. I would recommend it to anybody. There is an entire page, in about a 300 page report, devoted to oil and its impact on our economy. And there is a very interesting statement on page 26, which says, "Assuming no further substantial changes in domestic oil prices, most of the negative effects of lower oil prices have probably been absorbed, while the beneficial effects are yet to be fully realized." The thing that strikes me about that statement is the assumption that there will be no further substantial changes in domestic oil prices, and I think that is the issue that your bill, which I am proud to cosponsor, is trying to get at, which is that there is no validity to that assumption.

We are clearly riding a roller-coaster of price changes which we have no control over at this time, and the damage that that is doing to domestic production and the damage it is doing to our long-term ability to maintain any kind of independence in the energy field is very substantial.

But like I say, I could go into detail, and I will put a statement in the record, if I can, about the devastation that the recent changes in oil prices have caused in my home state on production and drilling activity and revenues for our state government, which have dropped very dramatically.

I do think that is a critical issue, but I think the national concern is very real, too. I do see us getting into a situation where Senator Chafee's constituents, as well as mine, will see very, very substantial increases in price down the road as a result of our inaction at this time.

It is clear to me that in five or 10 years, and maybe sooner, there will be a great deal of criticism of those who fail to act at this time.

I hope that we can build a record here to demonstrate the willingness to act on the part of some of us, at least, and I hope that we can be successful before the 100th Congress is over.

Thank you very much.

Senator BOREN. Thank you, Senator Bingaman, and we will receive your full statement for the record. I think, as you have indicated, the old word that "those who don't learn from mistakes learned from history are doomed to repeat them" is what we are seeing here. Surely, we have learned that it is not in the interest of consumers for us to become so dependent upon overseas sources that they then, once they have driven out the domestic competition, are in the position to dictate price. I think it would be a tragic mistake for the entire nation and for the consumers, perhaps even more than for the producers, if we were to allow ourselves to get into that situation again.

I appreciate your comments very much.

I want to turn now to my own colleague from the State of Oklahoma, Senator Nickles, who has made also a very great contribution to the energy policy debate. He is an outstanding member of the Energy Committee and has contributed many thoughtful proposals in the past. I am very pleased that he has joined us this morning.

Senator Nickles?

[The written prepared testimony of Senator Bingaman follows:]

TESTIMONY BY SENATOR JEFF BINGAMAN
Senate Finance Committee
Subcommittee on Energy Taxation
Legislative Hearing on the Oil and Gas Industry
January 30, 1987

I thank the Chairman for inviting me to participate in this hearing and for his leadership in focusing the attention of the Congress and the American people on the growing crisis facing our domestic oil and gas industry.

I am convinced our country is heading towards a real energy crisis. We are moving blindly down a track that is leading to increasing vulnerability in the face of unstable Middle Eastern sources of petroleum and inevitable higher prices for American consumers. Supply shortages could easily plague our economy once again as they did in the 1970's. Inflation could shoot up quickly again as oil prices rise. With the further depreciation of the U.S. dollar, you have a scenario for economic disaster.

The nation and our domestic oil and gas industry face an uncertain future -- uncertain because of lower prices, over-supply, and increased competition from low-priced imports of crude and petroleum products. The industry has been forced to cut back its activity -- signalling a loss of employment and a weakening of the industry's infrastructure. Capital expenditure programs have dropped by 50 percent since 1981. Drilling activity reached 46 year low in August. High-cost U.S. producers and stripper wells are being squeezed out of the market by the lower oil prices. And new supplies of petroleum are no longer being discovered, either in the lower 48 or Alaska, at a rate consistent with current consumption levels.

Deputy Secretary of Energy William Martin testified before the Senate Energy and Natural Resources Committee in September that of the 8 to 10 million barrels per day of surplus capacity available in the free world, only 5 percent comes from non-OPEC nations. More disturbing was a statement by former National Security Director John Poindexter that by the early 1990's we are likely to see imports rise to over 50 percent of domestic consumption. This is clearly a scenario none of us want to face.

Impact in New Mexico

The impact of current conditions on the industry has been devastating. Consider what has happened in my home state. New Mexico is the fifth largest oil and gas producing state in the nation in terms of total quantity and has suffered from the decline of oil and gas prices. Revenues generated by the industry showed a 25 percent drop in 1986. The total value of New Mexico's oil and gas activity has dropped 46 percent in the past year. Employment by the industry dropped from a low of 13,200 in 1985 to 9,000 in October of 1986. The number of drilling rigs are down to an average of 29 compared with 71 last year. And of the states' bankruptcies, estimated to be 2,500 for 1986, one fourth occurred in those counties where most of the state's oil and gas is produced. Current statistics do not begin to address the impact of this decline on the infrastructure of the industry, local communities and businesses that depend on the continued viability of the oil and gas industry.

Corrective Action

How do we correct the decline of a strategic domestic industry? First, we must take immediate and effective action in the Congress, action that this Administration has been unwilling to take. The Reagan Administration seems blind to the emerging crisis that confronts us. In six years, this Administration has embraced no comprehensive energy policy other than, as former Secretary of Energy Jim Schlessinger said in his testimony before the Energy Committee last week, "a de facto energy policy which can be called growing energy dependence."

The responsibility for action now rests with the Congress. We must act quickly. Senator Boren has taken a major step in meeting that responsibility.

I commend Senator Boren for his efforts and initiative in bringing this responsible legislation before the Committee today. His legislation has three important components:

1) Establishment of an Oil Import Excise Tax
2) Repeal of the Windfall Profits Tax
3) Repeal of burdensome Tax Provisions

I strongly believe that these bills are an essential component of a comprehensive legislative package that can help restore stability to the oil market and begin revitalizing our domestic oil industry.

The oil import excise tax proposal is by far the most effective action we can take to help preserve a strategic domestic industry. There appears to be widespread acceptance -- except in the Administration -- that this approach is needed. Such an action clearly helps bring long-term stability to the oil market, which would in turn help ensure the preservation of a strong, constant level of drilling in this country. The fee also would help reduce the real threat to our national security interests that is a result of increased dependence on imported oil and petroleum products.

The Windfall Profits Tax, while not being collected currently because of low oil prices, still costs the industry hundreds of thousands of dollars every year because of the mountain of paperwork needed to inform the government that there were no profits. The tax has done nothing to help us combat rising imports. It is only a tax on domestic producers. It is not a tax on imports. And it is these imports that have displaced domestic production and contributed to our negative balance of payments and the negative balance of trade we currently are experiencing in this country -- last year, over a $50 billion deficit in oil.

The repeal of particular tax items will help bring life to an industry that could surely benefit from new vitality. The repeal of the "transfer rule," repeal of the 50 percent of new income limitation, changing the rate of percentage depletion, and repeal of the IDC recapture rule all would help begin these revitalization efforts.

I hope this and future hearings in the Finance Committee as well as the Energy and Natural Resources Committee on which I sit, will begin to educate the American public and this Administration of the serious implications for the economic well-being and national security of the nation if the current crisis in our domestic oil and gas industry is allowed to continue. My view is that a strong, profitable domestic oil and gas industry is vital to this nation. The strategic interests of our country are clearly at risk.

From these hearings, we must build a consensus for an effective and comprehensive national energy strategy or policy -- a policy that is good for the entire country, not just oil-producing states.

I look forward to reviewing the testimony of the panelists today to see what recommendations they have for other actions that can help build a comprehensive response to the struggle our domestic industry is facing.

STATEMENT OF THE HONORABLE DON NICKLES, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator NICKLES. Mr. Chairman, thank you very much. I appreciate your having this hearing.

I think that it is important that we hear from some of the outstanding panelists that you have before us, to kind of bring us up to date.

I have almost thought at different times that we should call this, instead of "a hearing on energy," which Senator Bingaman and I have had several of in the Energy Committee and I know that you have had in the Finance Committee in the past, I would almost think we should call this hearing, "Wake up, America!" because there are some very serious problems.

The oil and gas industry has been devastated. We can go through the statistics, and maybe it would be helpful to do that; but we have done it on the floor many times. Senator Chafee has talked about it. And I think some of the repercussions of that are already taking place.

You mentioned in your statement that we used to have something like 45-4600 rigs running and now we have about 880-some or 60-some. In our state we have about 105, I think, and we used to have 880. So it is quite obvious that, if you have that kind of a reduction in drilling activity, you are going to have a decline in production.

Well, we were arguing that about a year ago, and now we have seen a lot of that happen.

You know, yes, we can talk about the devastation in the oil and gas industry, but it has very serious repercussions for the country—certainly for the producing states, but for the country as well.

I wish Senator Chafee was still here, but we will visit with him some more. I think he is very open in his viewpoint concerning import fee and other measures, but maybe we can let him see the light of day. There are some serious, serious problems.

Our country's dependency on imports is rising at an astronomical level—not a small level, not a gradual level. It grew from 27 percent to 38 or 39 percent, and it is going to continue esclalating on a month-to-month basis. And people should be aware of that.

When we had the shortages in 1973, we were importing, I think, 33 or 34 percent. Now, with the shortages in 1979 we were importing 44 percent. Right now we are approaching 40 percent, and we will continue moving right through the 40 percent. Mr. Chairman, my guess is that we will be at 50 percent probably in about two and a half years.

And there is not a lot we can do to stop that. We can slow down the decline, and I think it is awfully important that we do.

Mr. Chairman, I have a several-page statement that I would like to have entered into the record; but, just a couple of final comments:

The Department of Energy has been very slow to recognize this decline. We have had average daily production go from right at 8.99 million barrels per day to now where it is estimated at 8.3 million barrels per day. My guess is that six months from now you will probably looking at that right at 8 million barrels per day, a significant reduction, and it would probably continue to decline even further.

Again, I look forward to hearing from some of the panelists today to give their input on that. This has a serious national repercussion, because we are talking about our national economy, we are talking about paying for these imports.

Mr. Chairman, I think a lot of people on the Finance Committee have been concerned about negative balance of trade, and we hear a lot of Democrats and Republicans demagoguing an enormous negative balance of payments—last year $150 billion.

Mr. Chairman, oil payments comprised a very large segment of that, but that was a $15-oil. This Senator believes that as the dependency on foreign sources escalates, eventually you are going to see an escalation in price that is going to benefit, incidentally, the producing states, but it is going to penalize the consuming states, as Senator Chafee needs to become more aware of, and it is also going to greatly exacerbate the negative balance of trade.

Just looking at $25-oil, which I think we will see in I am going to say a couple of years, if not before, and if we are importing 50 percent, that is a negative balance of trade of about $75 billion, which is half of the negative trade balance that we have today, and that is a tremendous escalation. That is doubling the negative trade balance that we have from oil today.

I think people need to be aware of that. We don't see this pressure declining, we see it escalating. And it will escalate. Even from 1986 to 1987, the oil prices alone will greatly exacerbate the negative balance of trade.

A couple of comments: You introduced some legislation that I think are outstanding, and I compliment you for it, many of which are comparable to or similar to legislation that we have introduced in the past.

Now, certainly repealing the Windfall Profits Tax, I congratulate you for that; I have introduced a bill as well, and we have several cosponsors. Hopefully, we will be successful. I hope you can do it through the Finance Committee. If not, we will try to do it again on the floor, and hopefully, again, we will be successful. I am pleased that that the Administration is supporting that effort. That is certainly one thing we need to do.

The import fee: We heard Senator Chafee discuss it today. I was hoping he would stay, because we have discussed import fees, we have discussed various means of import fees, and I think, if we are going to be successful, possibly we need to change the title.

There are a lot of different ideas, where people say, 'Well, let us have a $5-fee or a $10-fee. I noticed the bill that you introduced was basically a floor of 18. I introduced one comparable. I think the identical bill we had last year was a floor of 20. So, if you are looking at oil prices at $18.50, in your bill it would cost nothing; in mine it might cost $1.50.

So, again, those aren't the $5 or $10 add-ons that would go on indefinitely, that Senator Chafee was so worried about, that would make us noncompetitive in the international market. I share his concern.

So, I think we need to address those, and I think the legislation that we have introduced is much more appropriate. The bill that I introduced has a $3 incremental fee for products. I am not sure your bill doesn't. I am very open on that issue. We have discussed it, and there are pluses and minuses for it. I would like to hear from the panelists today and receive their comments on it.

There is some support in Congress for a users fee. There is support in Congress for filling of the Strategic Petroleum Reserve. The Strategic Petroleum Reserve today has a little over 500 million barrels, and it is already authorized to go up to 750 million barrels. We could pay for that, Mr. Chairman. That means we need 250 million barrels put in. We could pay for that totally with the tax for one year alone of $2 on imports. It would totally pay for filling the Strategic Petroleum Reserve. If you did it over a four-year period of time, you could pay for it with a tax on imports of 50 cents.

Now, I think that would make sense. That is a users fee, and that would be a users fee basically to give us some security against unsecure foreign sources. I think that makes sense.

I also think we need to be aware of the fact of what is going on. Senator Bingaman and I have sat in on some hearings talking about the Irani-Iraqui conflict. The Iranians have been quite aggressive and seem to be gaining the upper hand. They are also very aggressive in oil pricing policy. And if they are more successful, I think you are going to see more dramatic increases coming in the future.

I also want to compliment you on your bill, Senate Bill 223. I think that is an outstanding piece of legislation. It is the bill that would help.

And certainly, trying to discourage premature abandonment of marginal wells is one thing that we surely should do. We should not allow that 8.9 to 8.3, to see a lot of those marginal wells be prematurely abandoned, for the most part lost forever, because OPEC manipulating prices.

One comment: Oil prices last year reached a low on the international market—or, it didn't reach the low; it actually went lower than this. It averaged as low as $9 in the month of August. That is the monthly average. They actually got into the $7-range.

That was not a free market at work; that was a manipulated market by foreign sources. They somewhat achieved their objective: they drove us out of the market already of almost a million barrels per day. I don't think we should stand idly by and allow them to decrease our domestic production and increase our reliance on their sources.

Again, I appreciate this hearing. I appreciate the panelists that you have with us, as well.

Senator **Boren**. Thank you very much, Senator Nickles, and we will receive your full statement into the record.

[Senator Nickles' written prepared testimony follows:]

HEARING BEFORE THE SUBCOMMITTEE ON ENERGY & TAXATION

January 30, 1987

STATEMENT OF SENATOR DON NICKLES

Mr. Chairman:

I thank the distinguished Chairman of the Subcommittee on Energy & Taxation for the opportunity to testify in support of tax legislation designed to remedy existing disincentives to domestic exploration and production of oil and gas. I applaud my distinguished colleague from Oklahoma for his prompt action on these measures before additional damage--perhaps irreparable damage--occurs to the infrastructure of the oil and gas industry in the United States.

I am sure that many of the Chairman's colleagues on the Finance Committee are aware of the economic hardship that has befallen the U.S. energy producing community as a result of foreign government manipulation of the oil market. During 1986, the average price of OPEC oil dropped from $27.81 to $16.10, and world crude sales averaged as low as $9.25 in August. Domestic producers, of course, watched helplessly as the prices for their oil also dropped from an average price of $25.64 on January 1, 1986 to single digit prices during the mid-year, and ended up at only $15.32 the first of this month.

We are all aware of the bank failures, company closings, and human suffering that have become commonplace in the energy producing areas of our country during the past year. This economic and social hardship is real, even though it may affect a relatively small number of states. However, it would be tragic if we did not recognize that the same cause of these regional woes also holds the potential for future economic suffering for the entire Nation. As foreign governments conspire to manipulate the price of oil, so must we acknowledge that the United States has not only not outgrown its oil import vulnerability, it is rapidly becoming more vulnerable with each passing month.

With the lower international oil prices has come lower domestic oil prices for U.S. oil--the world's high cost production. Domestic production decreased during 1986 by 7.7 percent, from 9.030 mm bb/dy in Dec. 1985 to 8.335 during Dec. 1986, according to the American Petroleum Institute, a loss of almost 700,000 barrels per day of production.

Our imports, of course, increased dramatically during 1986. Data from the Energy Information Agency indicate that our daily petroleum imports during 1986 averaged 21 percent more than the daily rate during 1985; 4.949 mm bbl/dy in 1985 v. 6.012 in 1986, excluding Strategic Petroleum Reserve purchases.

We are now approaching a forty percent dependency on foreign oil. API reports that during the month of December, the U.S. imported 39 % of its domestic oil needs, not counting SPR imports. And imports for the first three weeks of January are averaging even higher rates (6.665 mm bbl/dy for the two weeks ending January 16.) As most Senators here are aware, our Nation's 33 percent dependency on foreign oil in 1973 was sufficient to precipitate the first OPEC-triggered oil shock to our economy. The second shock, in 1978-79, occurred when U.S. dependency on foreign oil had increased to 44 percent of its needs, a dependency that was unfortunately in large measure caused by misguided federal government price control policies.

I am deeply concerned that without the passage of the Chairman's energy tax proposals, the U.S. petroleum industry will be unable to provide the essential buffer of domestic energy that is necessary to avoid unwanted fetters on our foreign policy. Moreover, increased imports of foreign oil exacerbate our foreign trade deficit. At $25.00 a barrel, a 50 percent dependency on foreign oil will cost over twice the $33 billion we paid for foreign oil during 1986, even if total domestic consumption does not increase.

Low energy prices have caused massive cutbacks in exploration and development by oil and gas producers of all sizes. There are less than half the rotary rigs operating in the U.S. than there were one year ago. This reduced exploration will dramatically affect the ability of the oil industry to resist the natural decline in U.S. production capacity.

Repeal of the Windfall Profit Tax is essential to promote increased domestic oil production. As the sponsor of S. 200, I fully support S. 255, your similar measure to repeal the Windfall Profit Tax that is cosponsored by Senator Bingaman. Mr. Chairman, you will recall that last year we successfully added a Windfall Profit Tax repeal amendment to the Public Debt bill. Although this repeal language was adopted by the Senate, it was dropped in the conference with the House. On behalf of all the cosponsors of S. 200, including Senators Dole, Domenici, Bumpers, Wallop, Murkowski, Cochran and Hecht, I want to thank the Chairman for this hearing and urge his prompt action on Windfall Profit Tax repeal in this Congress.

Currently, the U.S. Treasury is not getting a penny from the Windfall Profit Tax because domestic oil prices are not even high enough to reach the threshold for triggering the tax. However, domestic producers are forced to spend several hundred million dollars annually to perform the accounting and filing required under the Windfall Profit Tax. This administrative burden falls especially hard on the independent producers in this country. Many independent producers do not have centralized accounting staffs and none of them have the outside income from refining and marketing operations to keep payrolls up during these hard times.

In addition to reducing current administrative costs, repeal of the Windfall Profit Tax would ensure a more productive future for the oil industry. The specter of a 70 percent federal tax rate on old oil places a serious disincentive on reworking wells in old fields. Thus the Windfall Profit Tax is inadvertently discouraging the production of oil from the least expensive sources--existing wells in old fields. Similarly, the oppressive tier 2 tax rate of 60 percent on non-independent stripper oil has disastrous results when wells with low production capacity break down. As the Chairman well knows, the average stripper well produces only about three barrels per day.

Also inappropriate considering today's oil market and the growing U.S. dependency on foreign oil is the Windfall Profit Tax's tier 3 tax rate of 15 percent that is applied to heavy oil, incremental tertiary oil and newly discovered oil. It simply is a hard fact of life that the cost of producing oil in the United States is the higher per barrel than anywhere in the world. Yet, the Windfall Profit Tax discourages new production of oil from remote locations or deep wells or with expensive tertiary production techniques or from offshore rigs. It is new production that is the key to reducing the natural decline of U.S. production by adding to our proven reserves. The Federal Government should not be holding the sword of punitive tax rates over a devastated industry's attempts to increase its production and its proven reserves.

In addition, I am concerned that the oil industry has slashed exploration and development budgets not only because of low world oil prices during this past year, but also because of the volatility of those oil prices. This foreign government manipulated price volatility is a major disincentive to long-term oil and gas exploration and development plans, as wells as commercial efforts to invest in alternate fuel production.

In order to lend some order to this price volatility, and reduce the ability of foreign governments to manipulate our domestic energy investment decisions, I have been a strong supporter of a price floor on U.S. oil imports. My bill, S. 276, is identical to S. 2886 which, Mr. Chairman, you will recall we introduced last fall. S. 276 would establish a $20 floor price on imported crude oil. In future years, no matter how low major Middle East producers would force the world oil price, the landed price of world oil for U.S. consumers would be $20.00. Unlike the Chairman's import floor bill, S. 276 provides for an additional fee on imported products equal to the oil fee plus $3.00. I am looking forward to hearing any comments the witnesses may have on this "product differential."

Finally, just as we should not sit idly by and permit foreign governments to decimate our oil production capability, so too must we clean up our own tax code so that the Federal Government is no longer responsible for the plugging of marginally profitable wells. Accordingly, Mr. Chairman, I urge the committee's quick action on S. 233, your bill to encourage the continued production of existing domestic wells by making certain amendments to the Internal Revenue Code.

It is clear that these changes are needed to eliminate the restrictions and limitations on the oil and gas industry that discourage exploration and production activities. For example, oil and gas exploration costs are required to be capitalized although common sense would enable one to conclude that they are ordinary and necessary costs of producing oil. Moreover, the tax code provides that coal exploration expenses (including geological and geophysical costs and core drilling) can in most cases be deducted as an expense.

Historically, oil and gas producers were entitled to a percentage depletion rate of 27.5 percent. In 1969, Congress reduced this rate to 22 percent. After the Arab Oil Embargo increased the price producers received for their oil, the Congress greatly constricted the application of the percentage depletion rule and its rates. The Tax Reduction Act of 1975 cut the percentage depletion rate over time to 15 percent and disallowed the use of percentage depletion for all new gas wells and for all oil producers expect for certain quantities of independent and royalty oil. Now that oil prices have fallen again, the percentage depletion rules should reflect today's prices and marginal costs. I believe that the concept set forth in the Chairman's bill, using sliding rates based on average removal price, is a practical solution to the need for higher percentage depletion rates in years when prices are low.

With the repeal of the Windfall Profit Tax, enactment of an Oil Import Fee, and passage of S. 233, Congress will be taking significant steps toward increasing production from marginal oil wells and encouraging exploration and development of new fields. Agian, Mr. Chairman, thank you for the opportunity to participate in this proceeding. I look forward to hearing the witnesses' comments on these measures.

Senator BOREN. I would like to ask the first panel, now, if they would come to the witness table:

Dr. William Fisher, Dr. Henry Schuller, Dr. Charles Ebinger, and Dr. Phil Verleger.

We are very happy to have all of you with us.

Dr. Fisher is with the University of Texas Bureau of Economic Geology; Dr. Henry Schuller is with the Georgetown University Center for Strategic and International Studies; Dr. Ebinger is also with the Georgetown University Center for Strategic and International Studies; and Dr. Verleger is with the Institute for International Economics.

I will just move here from right to left. Dr. Verleger, we appreciate your being here this morning, and we would appreciate your statement at this time.

STATEMENT OF DR. PHIL VERLEGER, JR., INSTITUTE OF INTERNATIONAL ECONOMICS, WASHINGTON, DC

Dr. VERLEGER. Thank you, Mr. Chairman.

Members of this committee, it is a pleasure to be here today to discuss the outlook for the world oil markets and the possible responses which the Congress might consider.

I am particularly pleased that the Senate has elected to take this issue up so early in its session, because the events of 1986 have triggered a rebirth of energy advocacy in this city on the opinion pages of the major newspapers. Many, if not most, of the recommendations represent little more than calls for a return to the failed policies of the Seventies. Some, however, raise very valid questions, questions which ought to be addressed by the Congress and the Administration.

In my written testimony today, I have attempted to establish a framework for your evaluation of the many policy recommendations which will come before you today and in the days to come. I would like to summarize them very briefly with 11 points right now.

Let me start by first noting that the tripling of oil prices in 1973 and 1979 and 1980 can be traced to fundamental structural changes in the world oil market. These changes are once in a lifetime changes, and they will not be repeated.

Second, the problems experienced during the decade of the Seventies—fondly remembered as "the energy decade"—were largely self-induced by consuming countries. Well intentioned but poorly implemented environmental standards, regulations on offshore drilling, price controls, taxes, and fuel use regulations slowed the adjustments to the structural change which was taking place in the world market.

Third, the decline or really collapse in prices from 1981 to 1986 is traceable to the delayed consumer response to high prices and the effects of deregulation on supply. High prices served as an incentive to expand production, substitute other fuels, and reduce usage. At the same time, the deregulation of the industry permitted companies to rationalize operations and become more competitive, with the result that the oil industry today is made up of a larger number of smaller, much more agressive companies. On average, these companies are less integrated than they were 10 years ago, and they must be far more resourceful in their attempts to obtain crude.

Fourth, the decline in consumption, increases in sources of supply, and de-integration of the industry have contributed to price volatility. Increased trading on paper markets—crude oil futures and the spot markets—is a natural consequence of de-integration. Activity on these markets has increased the transparency of the world market.

Fifth, the United States will unfortunately become more dependent on imports of oil over the next 10 years. Our resource base is being exhausted.

Sixth, the increase in imports of oil does not, by itself, pose a threat to either our economy or the security of this country. Further discussion of an increasing trade deficit due to greater imports of oil misses the point that oil exporting countries import goods from the United States. So, especially given the stronger competitive position of the United States right now, the higher volume of oil imports and higher prices may be offset by increased exports.

Seventh, the skewed distribution of the world's presently-known reserves of oil towards the Middle East does, however, create the possibility that a few producers may from time to time engage in economic actions which are contrary to the long-term interests of all consumers. They may manipulate the market. It is in the interest of consumers of the United States, and indeed all consuming nations, that such actions be frustrated.

Eighth, the U.S. economy, as well as the economies of all oil-consuming countries, will become increasingly vulnerable to sudden changes in prices of oil moving in international trade, as production becomes more concentrated in a few countries. It is appropriate that new measures be considered.

Ninth, the most important measure which should be considered today is an increase in the size of the strategic stockpile. The United States and all IEA countries should move quickly to add to their emergency stockpiles. Given the need to control federal expenditures, the best approach would be to adopt the technique used by West Germany. There, importers are required to hold stocks in bond against volume of imports, equal, say, to one hundred days of their imports. The government could require that such stocks be liquidated under certain circumstances. Such a policy could double or triple our stockpile over a reasonable time period.

Further, such a policy could be implemented without having to take special actions to favor nearby countries such as Venezuela and Mexico.

Tenth, the Congress and the Administration should consider any actions on energy policy very carefully. Attempts to intervene in the market in the past through price controls, environmental legislation or other actions have had very large and often unpredicted impacts on the market. Thus, no action or very slow action is far more preferable to sudden changes in policy.

Finally, I was not familiar with Senator Boren's proposals on tax policy, but I was present at the creation of the Windfall Profits Tax, and I would strongly endorse its repeal. However, if it is not repealed, the adjustments to stripper regulations to permit transfers of properties from integrated companies to independents should allow for reclassification of the oil as stripper production.

I would also endorse legislation—although it is not under the purview of this committee—to immediately shut down the Economic Regulatory Administration's continued investigation into violations of the now long-gone oil price control regulations. It has been six years since price controls were dropped, and yet the ERA continues to file suits against oil companies for violating regulations which were understood to be unintelligible at the time. These efforts represent an attempt to take large amounts of money from an industry that doesn't have it anymore.

Recently, one company was served with an order requesting payment of a modest sum of $1 billion to the Treasury for violation of those regulations.

Thank you.

Senator BOREN. Were you able to complete your statement?

Dr. VERLEGER. Yes, I am done.

Senator BOREN. I appreciate your comments very much. I think we will let the entire panel complete their opening remarks, and then we will come back and address questions to the individual members of the panel.

I couldn't help but think, when you said they were "understood at the time to be not understandable," that that has to be an assessment that only could occur in Washington with the accuracy with which you have applied it.

Dr. Schuller?

[Dr. Verleger's written prepared testimony follows:]

Prepared Statement of

Philip K. Verleger, Jr.
Visiting Fellow
Institute of International Economics

Before the
Subcommittee on Energy and Agriculture
Of the
Senate Finance Committee

January 30, 1987

Mr. Chairman, members of the subcommittee, it is a distinct pleasure to appear today to discuss the outlook for world oil markets and the possible responses which might be taken by the government of the United States. I am pleased that the Senate has raised this issue so early in its new term because, as you know too well, the events of 1986 have triggered a rebirth of energy advocacy in this city and on the opinion pages of the nation's major newspapers. Many, if not most, of these recommendations represent little more than calls for a return to the failed policies of the 70's. Some, however, raise very valid questions, questions which ought to be addressed by the Congress and the administration.

In my testimony today I will attempt to establish a framework for your evaluation of the many policy recommendations which will come before you today and in the days to come. This description is presented in as unbiased a fashion as possible and is then followed by a separate discussion of potential policy recommendations. Briefly, in section one I present a discussion of trends in world oil markets over the last twenty years, while in section two I offer my analysis of the basic trends for the next ten years. Finally, in section three I make some suggestions for appropriate policies for the late 1980's and, at the same time, dismiss some other popular ideas.

Summary

The discussion presented in the body of my prepared comments can be summarised as follows.

> First, the dramatic tripling of prices in 1973 and 1979/80 can be traced to fundamental structural changes in the world oil market. These changes were once-in-a-lifetime events which will not be repeated.
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> Second, the problems experienced during the decade of the 1970's (fondly remembered as the "energy decade") were largely self-induced by consuming countries. Well intentioned but poorly implemented environmental standards, regulations on offshore drilling, price controls, taxes, and fuel use regulations slowed the adjustments to the structural change which was taking place.
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> Third, the decline (collapse) in prices from 1981 to 1986 is tracable to the delayed consumer response to high prices and the effects of deregulation on supply. High prices served as an incentive to expand production, substitute other fuels for oil and reduce usage. At the same time, the deregulation of the industry permitted companies to "rationalise" operations and become more competitive with the result that the oil industry is today made up of a larger number of smaller, more agressive companies. On average these companies are less integrated than they were ten years ago and must be far more resourceful in their acquisition of crude oil.

Fourth, the decline in consumption, increase in sources of supply and de-integration of the industry has contributed to price volatility. Increased trading on paper markets (crude oil futures and the spot or "wet" markets) is a natural consequence of de-integration. Activity on these markets has increased the transparency of the world market.

Fifth, the United States will become more dependent on imports of oil over the next ten years. The increase could be quite substantial.

Sixth, the increase in imports of oil does not by itself pose a threat to either our economy or the security of this country. Those who suggest that increased imports may worsen the nation's balance of payments are raising a specious issue - perhaps even pandering to audiences looking for reasons to "do something about oil imports." In fact, the United States is less dependent on imports of energy, as opposed to oil, than all but a few countries.

Seventh, the skewed distribution of the world's presently known reserves of oil towards the Middle East does, however, create the possibility that a few producers may from time to time engage in economic actions which are contrary to the long term interests of all consumers. It is in the interest of consumers of the United States, and indeed all consuming nations, that such actions be frustrated.

Eighth, the U. S. economy as well as the economies of all oil consuming countries will become increasingly vulnerable to sudden changes in prices as the volume of oil moving in international trade increases and production again becomes concentrated in a few countries. Thus it is appropriate that new measures be considered.

Ninth, the most important measure which should be considered today is the increase in the size of the strategic stockpile. The United States and all IEA countries should move quickly to add to their emergency stockpiles. Given the need to control federal expenditures, the best approach would be to adopt the technique used by West Germany. Specifically, importers should be required to hold stocks in bond in the United States equal to a specific percentage of their imports. The government could require that these stocks be liquidated under certain circumstances. Such a policy could double or triple our stockpile.

Tenth, the Congress and the administration should consider any actions on energy very carefully. Attempts to intervene in the market in the past through price controls, environmental legislation or other actions have had very large and often unpredicted impacts on the market. Thus no action or very slow action is far more preferable to sudden changes in policy.

I. Historical Trends in the World Oil Market

Probably no set of events in economic history has been more poorly understood or described than those which took place in the world oil market over the last twenty years. It is common to date the oil crisis to late 1973 when, according to the received view, a group of greedy exporting countries suddenly decided to raise the price of oil by two hundred percent and to reduce production to maintain the higher price. The popular view then ascribes the price increase six years later to actions by these same nations who seized upon the sudden loss in output in Iran as an excuse to exercise market power. Then, according to this view, oil exporting countries suffered their comeuppance as consumers switched to other sources of energy, reduced use, and displaced OPEC oil with new supplies developed in other countries.

As with any myth, this description of history has a kernel of truth to it. Oil exporting countries lost market share and the price collapse did occur because demand for oil declined and non OPEC supplies increased. However, the principal determinants of market behavior during the late 1960's., 1970's and first half of the 1980's are more diverse and the full story is far more complex.

A key factor which is often ignored is the transfer of resource ownership from the multinational companies to the governments of the oil exporting countries. In the late 1960's most of the resources in oil exporting countries were owned or controlled by multinational oil companies. During the late 60's 70 percent of Free World production outside North America was controlled by eight companies - the so called Seven Sisters plus CFP. (See table 1.)

The oil exporting nations attempted to negotiate transfers of ownership of these reserves back to the nations themselves during the late 1960's, but without much success. It was only after Free World demand suddenly caught up with productive capacity that producing nations were able to achieve success in their efforts to regain control over their reserves. Then, they seized control when the opportunity arose and when companies operating in producing countries required full production from all suppliers.

At that time the efforts of exporting countries to gain control over their own resources benefitted from certain specific regulatory actions adopted by consuming countries. Price controls on the production of crude oil in the United States, delays in permitting the construction of the Trans Alaskan Pipeline, limitations on offshore development and restrictive new environmental standards combined to boost the demand for oil while restricting development of domestic supplies. For example, the hated "gas guzzler" of the early 1970's was a consequence of Detroit's attempt to respond to expressed consumer preference for large cars combined with the hurried introduction of exhaust standards by EPA. American automobiles produced during the late 1960's, while large, were quite efficient. This efficiency was lost at least temporarily when emission standards were changed. Oil demand was also boosted by the construction of oil fired power plants in areas where utilities had traditionally relied on coal as these utilities sought low cost solutions to air pollution standards. Utilities' use of oil was further increased by their inability to buy natural gas due to the artificial shortage of that fuel created by price controls.

The increased demand for oil and resulting nationalizations in the early 1970's contributed to the first escalation in prices. Exporting countries were then able to maintain higher prices through 1978 by making periodic adjustments in output levels. The multinational companies continued to benefit from their prior relationships with the oil exporting countries and remained the primary distributors of OPEC oil. This continuation of prior relationships meant that the former holders of concessions continued to distribute the production of exporting nations to their own refineries and to other third party buyers such as Japanese oil companies, and other major oil companies.

As the decade progressed, however, many of the major oil companies began to reexamine the advisability of continuing to play the middleman in the distribution of OPEC crude. The profitability of third party sales was often small or non existent due to price controls imposed by either or both the oil exporting nation or the consuming country. At the same time the continuation of the sales relationship during a period of relative calm in the market created a potential liability in the event of a future supply crisis because such contractual arrangements could - and had been - extended by fiat by governments of consuming countries or the International Energy Agency.

The situation reached a crisis in early 1979 when British Petroleum lost a substantial portion of its supplies from Iran. BP was forced to cut off many of its major buyers including Exxon. In turn, Exxon notified its third party buyers that it was forced to reduce supplies to them on a pro rata basis according to the total volume of oil available to it. At the same time Exxon announced that it would not renew third party sales contracts. Third party buyers were suddenly forced to fend for themselves. The consequence was a sudden bidding up of prices.

The oil exporting countries seized on the increase in spot prices to quickly displace the majors with newer, presumably more compliant buyers. If the former concession holding majors reused to pay a bonus for access to oil during a period of supply tightness, then another, more malleable company might be found to displace it.

The impact of this change may be noted in the decline in volumes of oil distributed by the major companies (see Table 1). The Seven, now Six, Sisters reduced purchases and began to restructure themselves into smaller, but far more efficient companies. Shipping affiliates were sold. Refineries were either modernized, sold or closed. Capital expenditures on exploration were generally confined to those areas were a friendly investment climate assured the firm that success would provide at least a reasonable level of profit.

The consequence of this restructuring is that multinational companies distributed less of the Free World, non North American production in 1985 than in the late 1960's. Depending on the way one makes the calculation, the percentage had declined from 70 percent in the late 1960's (refer to Table 1) to between eight and twenty percent in 1985. They had been displaced as distributors of the world's production by new producer-owned oil companies, trading companies, and refining companies from consuming countries. The oil industry has, in short, been "fractured." It appears to be little different today from many other processing industries where ownership of most of the resource production facilities is separated from ownership of processing which is in turn separated from ownership of retail distribution facilities. The two price increases experienced in the 1970's were caused by the transition from the integrated to the fractured market structure.

Intervention by governments of consuming nations also contributed to the price increases of the 1970's and the artificial shortages. Imposition of more stringent environmental controls at a time of rapid economic growth contributed to an unexpected increase in demand. At the same time, price controls, allocation regulations and other programs prevented producers from finding and developing needed supplies in the United States and other producing countries. As a result, consumers were forced to turn to a limited number of suppliers, suppliers who then exercised their newly found monopoly power to boost prices.

The collapse of oil prices may be traced to the loss of their monopoly power. Higher prices provided the incentive to explore for and develop new hydrocarbon resources in many locations. Production increases were recorded in Brazil, Colombia, India, Egypt, Brunei, Malaysia, Egypt, Norway, the United Kingdom, China, Canada, Australia and the United States. Some increases were the result of exploration efforts dating to the 60's. (See Table 2 for a listing of increases.) However, other increases represented a direct and quick response to $ 40 oil. The effect of the increase in production was to leave OPEC with a diminished share of the world oil market. Eventually, the "cartel" lost control of the market and prices collapsed, just as many economists had predicted in the 70's.

II. The Next Ten Years

The December 20 issue of The Economist contained an article with the following leader: "Never Forecast, Especially the Future." It is wise advice which ought to be followed. However, this committee has asked that the witnesses offer their assessments of the future. The projections that follow are offered with the request that readers keep the advice of The Economist's editors in mind.

First, if prices remain at current levels, it seems apparent that oil imports by the OECD countries in general and the United States in particular will increase. Production in the United States will almost certainly decline as will production from the North Sea. At the same time consumption in the OECD will probably increase although at a relatively modest rate.

Second, it is probable that there will be significant increases in consumption in many developing countries (again assuming prices remain at current levels). Increases may well be recorded in India, South Korea, Brazil, Indonesia and other heavily populated, rapidly growing developing countries.

Third, the increased import requirements of the OECD and "newly industrialized countries" will come primarily from OPEC. It is possible that the production of the current thirteen members of OPEC will increase from 16 million barrels a day to 24 million barrels a day.

Fourth, much of the increased supply from OPEC must come from the Arab Gulf and particularly Saudi Arabia, Kuwait, Iraq, Iran and the United Arab Emirates. Thus the Free World will become more "dependent" on exports from these countries.

Fifth, it seems unlikely that these countries will try to limit production increases for the purpose of achieving prices above the $ 18 to $ 22 level through 1995 unless there is a major political change in the area and assuming that inflation rates remain low. The nations of the Gulf have a great interest in assuring the long term existence of a market for their oil and appear to understand that this can best be achieved by avoiding a third price explosion.

Sixth, it is, however, likely that the world will experience at least one more cycle of rising prices during the next decade as some act of God or war causes a sufficient amount of production to be removed from the market to cause another price "explosion." The most likely incident will be some major event in the Middle East but other scenarios, such as a disruption of

Alaskan, Mexican or Venezuelan output could have the same impact.

Seventh, the next crisis will not be as severe as the 1973 or 1979 episodes even if a greater volume of production is lost because the structural changes which accompanied those crises have been completed. Third party sales have been eliminated and replaced by a large, fairly efficient spot market. Resources are now under the control of the exporting nations. Thus the nature of the crisis will be less complex and confined to those companies who usually deal with the affected producer. In turn, the affected buyers will be able to turn to governments of consuming countries or the market to replace oil lost in the crisis.

Eighth, while an increase in imports will cause the value of merchandise imports into the United States to increase, it does not follow that the U.S. balance of trade will worsen. The increased receipts of oil exporting countries will be recycled in the form of increased purchases from developed nations. In the past the United States has benefited from such expenditures and it is probable that we will benefit again, especially given current exchange rates. Although an increase in oil prices and higher imports may cause a temporary worsening of the trade balance, the long term effect should be beneficial as long as DOD mandated export limitations do not get in the way.

Finally, it would appear that the oil exporting countries may have learned that their long-term interests are not well served by the rapid increase of prices during short-term disruptions. At various points during 1979 and 1980 several nations had the opportunity to exercise a little monopoly power by cutting supply, and most used that power. In the next crisis these countries will be less likely to repeat their actions out of a fear that they may have the same consequence as they did in 1986.

III. Policy Prescriptions

This short analysis of recent history and future prospects for the world oil market led me to the following conclusions with regard to the present energy policy debate.

First, the increased reliance on imports of crude oil and petroleum products does not, by itself, create a reason for action even if the volume exceeds past records. It is necessary that the Congress or the Administration set out some compelling reason for interference in the market before consumers are required to once again shoulder the burden of measures imposed to protect domestic producers.

Second, congressional or administrative action on seemingly unrelated issues should be examined for their impact on the oil market. As was noted above, well intentioned actions imposed in the early 1970's directed at environmental and inflationary concerns made a significant contribution to the price increases of that decade. It is important to recognize that any action which alters the supply demand balance for hydrocarbons must be examined very carefully because of the very long lead times required to develop new resources.

Third, it is entirely appropriate that measures be adopted to assure the citizens of the United States that they will not be victimized by efforts of a country, or a group of countries to manipulate the market to gain a competitive advantage. Quotas or fees are, for example, appropriate measures for preventing oil importing nations from temporarily lowering prices for the purpose of putting domestic producers out of business.

In this context it would seem that the United States should take King Fahd at his word when he expresses a desire to keep oil prices at $ 18.00 per barrel. It would be appropriate for the government to impose a conditional tariff on imports of crude oil for the purpose of maintaining an average domestic price of $ 18.00 per barrel. This fee should be fixed, not variable, but be adjusted from time to time to assure that the average price received by domestic producers remains above $ 18.00 per barrel, or whatever level is selected by Congress or the Administration. Action of this sort would ease the current difficulties domestic producers encounter when they seek outside funds to support exploration and development efforts. Action of this sort would also make it impossible for exporting nations to affect domestic production by temporarily manipulating the price of oil down.

Finally, Congress and the Administration should give serious considerations to finding ways to increase the size of the strategic petroleum reserve or developing other emergency stockpiles because the increased use of oil whether produced from domestic or foreign sources leaves the nation vulnerable to disruptions in the oil market. This is a particularly difficult problem given the present deficit in the federal budget. (Indeed, many people seem to advocate the imposition of a fee in lieu of increased expenditure on the SPR despite the clear economic superiority of the latter action because a fee will raise revenues while SPR expenditures increase the deficit). Adoption of the approach to this problem used by West Germany would seem to offer a simple, but effective solution to this problem. In West Germany, importers of oil are required to hold stocks equal to a certain percentage of their imports.

Adoption of a West German solution in the United States would seem to offer several benefits. First, stocks of crude oil would be increased significantly. Second, prices received for domestically produced oil and gas would be increased relative to world prices because the requirement to hold stocks would raise the cost of importing oil into the United States. Third, there would be no need to establish special programs for Western Hemisphere exporters such as Venezuela and Mexico because these countries could, if they chose, enjoy the benefits of higher U.S. prices simply by creating stockpiles in the United States. (Further, they could fill their U.S. stockpiles by producing above their OPEC set quotas if they chose.) Fourth, the adoption of such a proposal would provide the United States with a significant stockpile which could be used to prevent market disruptions. Finally, the size of the stockpile I have described would be flexible, increasing and decreasing with changes in the volume of imports. If the set aside requirements were large enough and if the distribution mechanism were clear enough, it would no longer be necessary to hold hearings like those you have scheduled today.

I would be happy to provide further discussion on any or all of the issues I have addressed above. Thank you for inviting me to appear today.

Table 1
Share of Seven Largest Multinational Oil Companies in Non North America Free World Production 1966 and 1985

	Adelman[3]		Equity Production[4]		Total Equity & Long Term Contract Crude Under Purchase[5]		Equity w/o Production North Sea[6]	
	1966	1966	1985	1985	1985	1985	1985	1985
Company	Output (mbd)	Share (pct)	Output (mbd)	Share (pct)	Output (mbd)	Share (pct)	Output (mbd)	Share (pct)
BP	2,612	14.9	629	2.1	1,492	5.0	190	0.7
Chevron	1,110	6.3	318	1.1	652	2.2	241	0.9
Exxon	2,831	16.1	742	2.5	1,457	4.9	377	1.4
Gulf	1,710	9.7						
Mobil	854	4.9	381	1.3	775	2.6	278	1.0
Shell	2,093	11.9	1,061	3.5	2,874	9.6	691	2.6
Texaco	1,154	6.6	367	1.2	661	2.2	321	1.2
Others	5,186	29.5	26,532	88.4	22,119	73.7	24,452	92.1
Total[1]	17,550		30,030		30,030		26,550[2]	

Notes:
1. Production represents total non North American Free World output except column 7.
2. Total non North American, non North Sea Free World production.
3. Source: Adelman [1972], page 80.
4. Source: Reserve disclosures of individual companies in company annual reports.
5. Source: Company annual reports.
6. Source: Production shown in column 3 less equity production attributed to the company by Mabro et al. [1986]

Table 2

Increases in the Production of Crude Oil in Eight Non OPEC Nations Between 1980 and 1986 (thousand barrels per day)

	1980	1986	Increase
Brazil 187	610	423	423
United Kingdom	1,609	2,570	960
Norway	460	810	350
Cameroon	55	200	145
India	188	620	431
Malaysia	263	490	226
Egypt	601	800	198
China	2,119	2,580	461
Total	5,482	8,680	3,194

Source: Petroleum Economist

STATEMENT OF DR. G. HENRY M. SCHULER, GEORGETOWN UNIVERSITY CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES, WASHINGTON, DC

Dr. SCHULER. Senator Boren, it is a privilege to be here, and I should apologize for not having prepared testimony; but the Center, in conjunction with the Oil Institute for International Affairs in London and the Institute for Energy Economics in Tokyo had a conference early this week, which snow moved to mid-week, so I haven't had a chance to prepare written testimony.

Senator BOREN. We would be happy if later you wish to add to your verbal remarks today by submitting a written statement. We would be happy to receive that.

Dr. SCHULER. Good. Well, thank you. I seldom read my testimony, but I will read into the record some remarks I prepared early this morning.

Senator BOREN. Please. Go ahead.

Dr. SCHULER. Those of us who are concerned about the energy security of the Western Alliance look back somewhat wistfully to 1985, when the actual delivered-cost of oil imports averaged $26.60 for the entire year. I say "wistfully," because that level of prices enabled us to achieve a number of energy security objectives.

The decline of domestically-produced crude oil and natural gas liquids was retarded by adequate investments in U.S. oil, which is necessarily high-cost regardless of whether it is old or new. New U.S. oil is high-cost, because it comes principally from operations which are at the geographic frontier of our land mass in the Arctic, at the operational frontier of water depth, and at the technological frontier of the search for small, elusive fields. Old U.S. oil is high-cost, because much of it comes from reservoirs which have lost the natural drive of youth and must be produced by costly pumping operations or enhanced oil recoveries.

Twenty-seven dollar a barrel oil also rendered fuel oil largely uncompetitive in the electrical utilities and industrial boiler market, thereby spurring massive fuel switching to natural gas, coal and, in the case of our European and Japanese allies, to nuclear power.

Similarly, $27-a-barrel-oil maintained the impetus for conservation. Automobile fuel-efficiency standards were almost sacrosanct, the 55 mile-per-hour speed limit seemed an acceptable trade-off, and appliance-efficiency standards were within grasp.

All of that changed in 1986 when one country, Saudi Arabia, embarked upon a pricing policy which can only be described as "predatory" in its efforts to destroy competitors. I use the word "predatory" because it is both descriptive in the general lexicon and recognized in the jargon of anti-trust law.

Society has its share of romantics who are quick to offer intellectual rationalizations for predators, noting, for example, that the House of Saud's self-interested quest for survival is no different from that which motivates all of us. Moreover, environmentalists have come to recognize that predators can contribute to the general good by restoring balance.

We are, for example, reintroducing wolves to the Northern Rockies, because the elk herds have grown to the point of driving out other species.

Those romantic notions may well be true, but society generally chooses to resist predators, because their prey is often undifferentiated, as in the case at hand, when it is unclear whether the Saudis seek to feast on OPEC cheaters, North Sea investors, U.S. stripper well operators, or Iranian muhilahs. And, in any event, there is always a great risk that predators will acquire a taste for additional prey, once they have tasted blood, as when those reintroduced wolves turn from dispensable elk to valuable cattle.

In short, the prey's instinct for survival is at least as great and legitimate as the predator's. Therefore, it is entirely appropriate to examine the ways in which Saudi Arabia's predatory pricing policies have damaged the investment climate for American and Free World energy development in order to develop means to preserve our security.

Saudi Arabia's declaration of a price war in late 1985 has preyed upon the investment climate for U.S. energy development in two fundamental respects:

Immediate capital constraints. The Saudi price war severely curtailed the energy industry's available investment funds by driving world oil prices to levels which were inadequate to generate internal cash flow or to attract outside capital.

And second, long-term investment uncertainty. The Saudi declaration of a price war has also created pervasive uncertainty by demonstrating that the world's largest potential exporter is both willing and able to act in a capricious, hostile, and totally self-serving manner.

As fully intended, both factors have severely discouraged the investments required to avoid a massive rise in oil imports. And I won't itemize those, since you noted them so carefully in your opening remarks.

Reversing this threatening trend will not be easy, but I believe it is useful to remember the dual consequences of Saudi Arabia's predatory pricing policies. The immediate threat posed by capital restraints has been vastly alleviated by the House of Saud's apparent decision to abandon its price war. I believe that the Saudi decision to relinquish leadership of OPEC, and the increasing dominance of Iran, will give OPEC both the will and the discipline to restore prices to the $22–24 level in short order. Therefore, I do not believe it will be necessary to adopt an oil import fee which is designed to raise the price of oil and increase cash flows.

I recognize that my confidence in OPEC discipline is controversial, and I would welcome the opportunity to defend it during the question-and-answer session. However, I would prefer to spend the rest of my time focusing on the second consequence of the recent Saudi price war—long-term investment certainty—because I believe it requires action, even if prices are increased or maintained in the coming months.

As previously noted, the Saudi decision to enter into a price war, regardless of whether it was politically or economically driven and heedless of whether it was planned or reactive, has sent the signal that world oil prices are ever subject to predatory policies. Therefore, bankers, private investors, independent operators, and corporate boards can have no confidence that future price levels will support the massive long-term investments which are required to avoid rising dependence upon the volatile Middle East, an area which currently provides half of the exportable oil moving in world trade and controls 85 percent of the world's installed but unutilized production capacity, and possesses 70 percent of the non-Communist world's proved but undeveloped reserves.

Therefore, despite my personal confidence that OPEC will raise and hold prices, I do not believe it is a gamble which the U.S. and its western allies should take. Therefore, I urge Congress to prod the Administration to initiate discussions of a floor price within IEA or the OECD. If, as I anticipate, OPEC restores prices to $24 a barrel, IEA could set the floor price several dollars lower and thereby provide a level of investment certainty which would otherwise be totally missing. Doing it on an IEA or OECD basis would avoid the risk of uncompetitively-priced feedstocks which so worries U.S. petrochemical producers, and it would probably assure that it would never need to be implemented, because OPEC abhors the idea of shifting revenues on its depleting assets from producing governments to consuming governments.

Persuading our allies to adopt such a course would not be easy, but we should recognize that it has strong precedent. In fact, in 1976 Henry Kissinger persuaded the IEA to adopt the minimum security price, which was set at $7, for the next four years. Although that price level, equivalent to about $15 in current terms, has expired, the basic concept remains in place. I believe it should be implemented once again.

Senator BOREN. Thank you very much, Dr. Schuler, for some very interesting testimony. I might note that you hold the Bartlett Chair in honor of my distinguished predecessor here, who made such a contribution to energy policy during his lifetime. I think that, were he with us, he would reflect with great contentment on the kind of statement you just made.

Dr. Fisher, we are very pleased to have you with us this morning.

STATEMENT OF DR. WILLIAM FISHER, UNIVERSITY OF TEXAS BUREAU OF ECONOMIC GEOLOGY, AUSTIN, TX

Dr. FISHER. Thank you, Mr. Chairman, and Senator Nickles. It is a real pleasure to be here with you this morning, and I commend you for scheduling these hearings.

I have prepared a statement and have provided it to the committee, but let me just briefly summarize and lay out the production impact that we have witnessed in 1986. Those numbers are now in.

The first year devastation is really worse than was expected by almost anyone. I think this is a particular tragedy because we have been involved in a six-year run of stable to even increasing production, even in the lower 48, after we had reversed declines that had started in the 1970's. Now, we have returned to a level of production decline that even exceeds the levels in those days.

According to data that have just been released by the DOE and is consistent with state agency reported figures, the average annual production for the U.S. in 1986 was down 300,000 barrels, or about three and a half percent from the 1985 average.

Senator BOREN. What percent was that?

Dr. **Fisher**. It was 3.3 percent.

Senator **Boren**. Three percent decline in domestic?

Dr. **Fisher**. Right. That is an average annual, but that significantly understates the dimension of the production impact.

For one, the impact of lower prices was really reflected only in the last three quarters of the year. Alaska production was actually up last year a little bit, and the federal OCS production showed no decline.

If you look at the year-long loss of production running from January, or in fact running from about March, through December, that ran to better than 680,000 barrels a day. Compared to capacity of last year, that is a decline of close to 8 percent.

If you take the gain in production of Alaskan oil and back it out, the Lower 48 then suffered an effective loss of 725,000 barrels, and that was a decline through the year of better than 10 percent. And since federal OCS production was stable, the whole of that 725,000 barrels was lost on land in the Lower 48. And that gives you an effective decline of 12 percent. That is a drop in production without precedence in the United States; we had never experienced anything like that before.

That loss really comes from two main factors: one, simply foregone drilling that didn't take place, as you pointed out in the rig count; and the second is simply loss of marginal production. Those two main sources were the sources of the loss.

But beyond the concentration of the losses to the on-land Lower 48, and that was where most of it was experienced, there were some producing provinces in the country that were especially hard-hit, and those were in areas where you had a "double-whammy" if you will, the loss in foregone drilling and the marginal production areas. And in those parts of the country we saw annual average losses in excess of 12 percent, and year-end declines greater than 20 percent.

Your own state—which had seen production declines on the average of little better than 5 percent during the Seventies, but reverting, during the early Eighties, to an actual increase of an average annual of about 3 percent a year—lost 12.5 percent average annual last year, and at year end lost better than 23 percent, a real devastation in terms of production capacity.

And that is the kind of pattern that we see throughout the independent-operator country, like in North Texas, Oklahoma, Kansas, throughout most of the Mid-continent, a lot of the Rocky Mountain states.

In areas of the Lower 48, such as the Gulf Coast, for which we did not have strong reserve drilling but through more aggressive drilling were able to reduce production decline rates in half, we find those areas falling to decline rates of greater than 13 percent in 1985, which are greater than the worst we had on record in the early Seventies.

It was only in those areas of the country—a couple of areas, in the Permean Basin of West Texas, and in part of New Mexico, where we have had extensive reserve growth from infill drilling, and in California, where there has been a lot of installation of thermal recovery of oil—that we saw declines that were somewhat less. But even in those areas it was very tough. We are seeing declines in California of about 10 percent from January through December. Those same kind of declines occurred in Texas as well.

If we did not have those couple of areas, with Alaska holding up, plus the federal OCS, we would have been in real serious straits, much, much worse than where we are at the present time.

My guess is that, if we continue with the loss of drilling in the magnitude that we have—in other words, running about 40 percent of what we ran during the early Eighties—that will translate into a production loss of about 400,000 barrels a year. That is what occurred, roughly, this year. That will continue on to 1990.

The balance of the production loss this year, about 325,000, is on the marginal side. Some of that will come back, because some of it is temporarily plugged. Some of that has already been permanently plugged, and some, when the wells are reopened, will simply not be in any kind of shape to maintain.

So, I am really anticipating that we will lose something on the order of about 1.7 million barrels a day of capacity on through 1990 from foregone drilling, and about an additional 240,000 barrels, for a total of about 400,000 barrels of marginal production.

Senator NICKLES. Dr. Fisher, are you saying we will lose 400,000 barrels a day in each additional year?

Dr. FISHER. It will accumulate through 1990. So, that will break it down by years, a total of between now and through 1990 of about 2 million barrels a day of capacity.

Senator NICKLES. All right. We have already lost 700,000. Another?

Dr. FISHER. Another 1.3 million, as we are projecting here.

Senator NICKLES. And right now we are what? About 7.3? And you project we will be about 5.3 in 1990?

Dr. FISHER. We will be about 6.2, by the time you count Alaska, which is another factor here.

Let me touch just very briefly on Alaska. Their production was up last year, but there is a scheduled decline in Prodhoe Bay production to come in 1988 or 1989. But if we only get two years of that deadline, that will be about 12 percent, annually, there is another 400,000 barrels of loss. And of course, by 1990 Alaska decline will be in full fling.

So, I am really looking at a production in 1990 of about 6.2 million barrels a day of crude and condensate, and that is about 30 percent less than the 1985 level. It translates into about a 6-percent annual average rate of decline.

And depending upon rates of consumption, and even if you look at those very, very conservatively, with loss in production capacity, both on the marginal side and from foregone drilling, is going to put us in a couple of years, at the 50-percent level.

The real critical thing, I think, about 50 percent is that, at about that level of import demand, the overall level of consumption will be about 90% of OPEC capacity. And that is precisely where it was in 1973 and in 1979. And those periods in history we recall quite vividly.

I think the United States has, Mr. Chairman, a resource base that would allow it to have a fairly steady level of production, if we pursue it as agressively as we did in the late Seventies and in the early 1980's. I do not subscribe to the fact that it will inevitably decline; I think we can maintain State production for 15 to 20 years, or maybe even more, for a very adequate transition. But the resource base has to be pursued aggressively, and I think the only effective way to do that is to restore prices to a relative level of where they were at a time when we did stabilize production in the early 1980's. And probably the most efficient and effective way is some form of variable import fee.

Thank you.

Senator **Boren**. I think we certainly have been enlightened by your testimony. I am almost constrained not to thank you for your testimony, because of the kinds of statistics that it contains.

But in all seriousness, the figures as you presented them, the data base that you have given us, presents a picture that certainly we cannot afford to ignore, and one that I hope would awaken all of our colleagues to the nature of the threat that we face, wherever they might happen to live in this country.

We have been joined by the distinguished Chairman of the Energy Committee, Senator Bennett Johnston of Louisiana, who has taken over the helm of the Energy Committee recently and is certainly a person who understands energy security.

Senator Johnston, before we complete with Dr. Ebinger, are there any opening comments that you might like to make?

[The prepared written testimony of Dr. Fisher follows:]

Statement
of
William L. Fisher

Director, Bureau of Economic Geology,
and Leonidas T. Barrow Chair of Mineral Resources
The University of Texas at Austin

on

Production Impacts of Low Oil Prices

to

U.S. Senate

Subcommittee on Energy and Agricultural Taxation
Committee on Finance

January 30, 1987

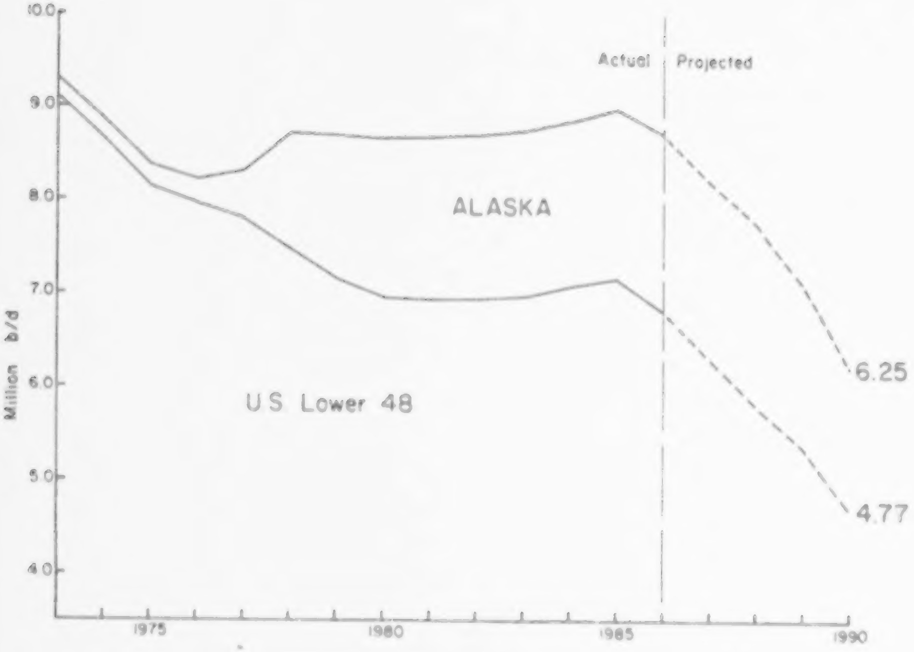
Mr. Chairman and Members:

Almost all are aware of the dramatic and drastic changes 1986 brought to the U.S. economy picture. The hard numbers on production losses are now in, and their first-year devastation exceeded the worst expectations.

A decade ago, this Nation was looking at declining domestic production of petroleum and increasing dependence on foreign importation. We had lived through the inflation and economic destabilization of one OPEC price shock and were getting ready for a second one.

While views differed on how to deal with the problem, all agreed it was a problem to be dealt with. And we did. As a result, during the first half of this decade, U.S. domestic production was stabilized, consumption was reduced through energy efficiencies and alternative energy use. Levels of imports were dramatically reduced, and the U.S. economy was stabilized.

But, 1986 brought the massive dumping of foreign oil by OPEC and with it an unprecedented collapse in oil prices. The major energy effort mounted just a decade ago has been largely dissolved. The largest annual oil production loss in U.S. history was posted in 1986, and 1990 production is projected to be 30 percent lower than the 1985 level. Imports during 1986 increased at a rate equal to the rapid rises in the 1970's and are



U.S. crude oil and lease condensate production
(Projected assumes 16 dollars/bbl, in 1986 dollars)

within two years of the 50-percent mark, exceeding the heavy dependence of the 1970's.

The hard lessons in energy we learned in the 1970's have been forgotten. We are permitting the major investment we made and realized in domestic energy sufficiency to be forfeited. And the energy problems of the 1970's are again upon us, and likely to be worse.

Production Stabilization

The higher prices for oil and natural gas that existed during the late 1970's and early 1980's brought forth aggressive drilling. Reserve additions increased, equaling and even exceeding levels of production. Near-decade-long production decline was arrested in the lower 48 states. The magnitude of the U.S. resource base and its response to aggressive exploration and development indicated that relatively stable levels of production could be sustained well into the next century.

With higher prices for oil and gas, other energy sources were developed, including renewable, alternative energy sources; energy sources in the U.S. were diversified, and the historic dependence on petroleum for three-fourths of total energy consumption was reduced to two-thirds. Improved efficiencies in energy use led to substantial decreases in volumes of energy consumed per unit of real GNP. Real economic growth was eventually achieved even in the face of higher energy prices.

Overall net imports of energy, chiefly petroleum liquids, were reduced to half the level of the 1970's; imports from the Arab countries in OPEC fell from a 1979 high of 3.0 mmb/d to less than a half million barrels daily in 1985. Imports which had reached nearly half of the U.S. total supply of petroleum, were reduced to well under 30 percent of total supply. U.S. inflation rates of the late 1970's, triggered to a significant degree by the two OPEC-induced price shocks of the decade, were reduced by two-thirds in the 1980's.

The threat to national security posed by high levels of imports and vulnerability to supply disruptions, and the reality of economic destabilization caused by oil-price shocks, were seemingly things of the past.

Dramatic Changes in 1986

The events of 1986, however, have drastically changed the world and U.S. energy situation, and if the current situation is not altered substantially and soon, the conditions of the 1970's will almost certainly be repeated in the early 1990's.

The effect of higher oil prices in the non-Communist world during the late 1970's and early 1980's was to reduce demand by almost 7 mmb/d and to increase supply by 6 mmb/d. The U.S. lower 48 in 1985 was producing 2.0 mmb/d of crude oil more than if the declines of the 1970's had not been arrested. The substantial excess capacity thus generated in the non-Communist world was absorbed through rather severe production cutbacks by

OPEC and particularly the Saudis in an effort to maintain higher world prices. Saudi production at year-end 1985 was less than one-fifth the level of the early 1980's and was directionally heading to zero. In an attempt to recapture market shares, the Saudis more than doubled production, flooding the market. This action led in very short order to a fall in oil prices from $27 per barrel in December 1985 to as low as $8 per barrel in the middle of 1986. Since the fall in January of 1986, yearly average prices have been a little less than $15 per barrel. The impact of reduced oil and, correspondingly, natural gas prices has been severe and dramatic. The U.S. rotary rig count in the last half of 1986 was only 40 percent of its 1985 count and less than 20 percent of the level of the early 1980's. Seismic activity in 1986 ran less than half the level of 1985 and a bare one-third the level of the early 1980's. The loss in oil production capacity has been swift and deep.

Production Impacts

Estimates differ on the amount and timing, but not the direction of the drop in exploration and development activity and the effect it will have on near- and longer-term U.S. production. For as certain as the increases in drilling in the late 1970's and early 1980's led to corresponding increases in reserves and stabilization of near-decade-long production declines, the decrease in drilling that was seen in 1986 and that will persist if prices remain low will lead to corresponding decline in reserve additions and, with it, declines in U.S. domestic production; and marginal production will be lost as well. The average of some 10 national projections of 1990 production, made after the fall in prices but before the full impact on 1986 production was reported, at price levels in the $15-per-barrel range, was 6.5 mmb/d, a full quarter less than 1985 production.

According to data just released by the Energy Information Agency (EIA), and consistent with state agency reported figures, average annual production for the U.S. in 1986 was down 300,000 b/d, or 3.3 percent from the 1985 average. But the annual average level significantly understates the dimensions of the production impact. The impact of lower prices was reflected in production only during the last three quarters; Alaska production was up over 1985; and federal OCS production showed no decline in 1986.

The year-long loss of production from January through December, as projected by EIA, was 682,000 b/d, a decline of 7.6 percent. If the gain in production of Alaskan oil is backed out, the lower 48 states suffered a loss of 725,000 b/d, a decline of 10.1 percent. Since federal OCS production was stable, the whole of the 725,000-b/d production loss was sustained in the onland and state water areas of the lower 48, a year-beginning to year-end drop of 12 percent.

Beyond the concentration of losses to onland lower 48 areas, some producing provinces were hit especially hard. Areas of the country where a very large percentage of production is from marginal stripper wells took a devastating average annual loss of production in excess of 12 percent and January through December declines in excess of 20 percent. Particularly hard hit was the independent operator country, such as North Texas, Oklahoma, and Kansas, as well as the Rocky Mountain States. Areas of the lower 48 states where reserve growth from extended conventional development has not been as strong, but where aggressive drilling in the early 1980's had cut decline rates of the 1970's to half, notably the U.S. Gulf Coast onland, took declines similar to those in the stripper production areas. Louisiana onland experienced an annual decline in 1986 of more than 13 percent from 1985, and the Texas Gulf onland recorded similar losses.

Areas of the lower 48 states where reserve growth had been strong during the 1980's and which had reserve-growth-boosted additions to levels equal to or even higher than production--infill drilling in the Permian Basin of West Texas and steamflooding in California, as examples--experienced the least, but still notable, impact. California onland and state waters had a January through December decline of less than 10 percent and an average annual decline of just under 4 percent. If the 20,000-b/d mandated production shut-in of Elk Hills is discounted, average annual declines held at only about 2 percent. Texas managed an annual decline of 6 percent, equal to its greatest annual decline of record in 1979. The strong reserve-growth areas of the Permian Basin kept the Texas decline from being twice the actual rate.

My estimate is that about 400,000 b/d of the lower 48 January through December loss was due to foregone drilling. The average annual levels of oil drilling in the latter part of 1986 had fallen to about 40 percent of the average annual levels of the early 1980's, during which time U.S. lower 48 annual reserve additions averaged about 2.5 billion barrels. In simple terms, the January through December drop in drilling would yield a loss on the order of 1.5 billion barrels of reserve additions. With about 10 percent of annual additions going to first-year production, given the high concentration of oil drilling in extended field development, the loss from foregone production in 1986 amounted to a little more than 400,000 b/d. The balance of the U.S. lower 48 loss, about 325,000 b/d, is in the area of either already permanently lost, suspended, or deferred marginal production. A portion of this volume has already been lost because of permanent plugging of wells. If prices stay low, my guess is that half the amount, 160,000 b/d, will not come back. Some is already permanently lost, and some will be permanently lost over the next few months owing to deterioration in temporarily plugged wells, or to a later decision to plug permanently now temporarily plugged wells because prices did not improve sufficiently to make the wells economic. My judgment is that of the 725,000-b/d January through December production loss, about 160,000 b/d will come back, at least temporarily.

In short, areas hit chiefly by declines in reserve-growth drilling had less in 1986 production loss than those areas with both loss of drilling and loss of marginal production. All producing areas were hit, but some, and particularly those areas with large concentrations of smaller independent operators, suffered acute losses.

Assuming that prices stay above $15 and below $20, but volatile at the high end of the range and thus discounted to some extent in exploration and production investments, an annual average of about 15,000 oil completions will be made. Such a level is near the average annual rate of the latter part of 1986 and is about 40 percent of the average annual effort of the early 1980's--the level that allowed reserve additions to equal production and production to stabilize. The anticipated level of drilling will result in foregone reserve additions and a total production loss of about 1.7 mmb/d for the period 1987-1990. Of the estimated 325,000-b/d January through December loss in the lower 48 states due to either already lost, suspended, or deferred marginal production, 160,000 b/d will be lost permanently over the next few months. The balance, 165,000 b/d, plus an additional 75,000 b/d of marginal production, or a total of 240,000 b/d, will be lost in 1987 through 1990. Total production loss of crude and condensate from the U.S. lower 48 through 1990 is estimated at about 2.0 mmb/d, yielding a 1990 annual production level of just under 4.8 mmb/d.

The production outlook in Alaska must be considered separately. Average annual production in Alaska during 1986 is projected by the EIA to be 1.865 mmb/d, up 2 percent over 1985. However, the supergiant Prudhoe Bay field is expected to go into normal production decline sometime during 1988. If that decline amounts to an annual rate of 12 percent during 1989 and 1990 as expected, about 400,000 b/d of current capacity will be lost. Undeveloped fields on the North Slope could provide upwards of 1 mmb/d of production to back out some of the Prudhoe Bay decline. However, unless prices move to at least $20 a barrel, little of this undeveloped capacity is likely to be economic to develop. A major concern is that Alaskan production, providing such a critical boost to U.S production in the 1980's, will most likely diminish through most of the 1990's, when U.S. lower 48 production will have been severely eroded and still in sharp decline.

Even with essentially sustained production from Alaska, lower oil prices, if they persist as likely without any U.S. action, will yield a crude oil and lease condensate production level of about 6.2 mmb/d in 1990, 30 percent less than the 1985 level, or a 6-percent average annual decline. If lower prices persist into the 1990's that rate will be increased as Alaskan production declines.

Projected Import Levels

Various projections of demand for petroleum made during 1986 showed about 1-percent annual increase through the balance of the 1980's and into the 1990's. Modest increases in the face of lower prices assume that most energy efficiencies effected by higher prices are structural, that U.S. trends away from heavy industry will continue, and that overall economic growth will be modest. However, it should be noted that U.S. demand for petroleum in 1986 was 16.2 mmb/d, 3 percent greater than 1985. This along with production declines puts imports at just slightly under 6 mmb/d, or about nearly 37 percent of supply. But, even if increases in demand in 1987 and beyond run only 1 percent, and if natural gas liquid production declines only 4 percent annually (less than the expected natural gas production decline), imports will reach 50 percent of supply during 1989, exceeding the all-time historical high reached in 1977. Significantly, this level of consumption will translate to a utilization rate of OPEC capacity of about 90 percent, precisely the levels reached when the 1973 and 1979 price shocks were effected. Many argue that OPEC will not again set a price so high to suppress demand significantly nor high enough to stimulate exploration and production of more marginal resources like those in the U.S. But, if lower prices persist, consumption will continue to increase and more marginal production will continue to be lost so that Free-World demand for petroleum will most likely exceed production capacity in the early 1990's. At such point, neither OPEC nor any other producing entity would have the capacity to restrain prices, even if they desired, unless substantial efforts were made by OPEC, particularly the Saudis, to develop additional production capacity.

Impact of Imports

The trends established so firmly in 1986--decreased domestic production, increased consumption, and increased imports--and almost certainly to persist with low oil prices, stand in marked contrast to the situation of stable production, stable demand, and reduced, constrained imports achieved in the period of 1979 through 1985. The trends now in place have a remarkable similarity to those of the 1960's and early 1970's that were to set this Nation up to the substantial national security threats and the economic destabilization that occurred later in the 1970's.

The extensive energy debates of the 1970's, it should be remembered, centered not on whether high levels of U.S. oil imports were a threat to national security and economic stability--they were agreed to be--but rather on the means to curb and reduce levels of imports; Congress enacted extensive and expensive legislation to reduce import levels. The energy debate today, to the extent enough interest can be generated to constitute a debate, centers not on whether U.S. production will decline, consumption will increase, and imports will increase. All agree to varying degrees that such will be the consequence of lower prices. Rather the debate is whether high levels of imports constitute a threat significant to warrant substantial action by the U.S.

There are those who argue that the energy world of the 1980's is different from that of the 1970's and that high levels of import dependence in the future would not be a significant threat to national security nor to economic stability; the following issues are commonly cited as the basis of inaction.

1. Countries should do and only do what they do most efficiently. The low-cost oil producer should thus produce oil; high-cost development and production of the kind so prevalent in the U.S. should be avoided. Oil has no value unless it is produced and sold, and such will assure that the oil-exporting countries will be our basic suppliers. A world of global interdependency is rapidly evolving, and the free market should be allowed to operate. The counter arguments are that factors other than monetary are and have always been involved in trade, that most international trade now involves markets controlled by and in intimate partnership with governments, and that, in the case of oil trade, there is no substantial difference now from in the 1970's.
2. To the extent that the U.S. increases its dependence on foreign sources of oil, those sources are now diversified well outside of OPEC and particularly the Middle East OPEC. Notably cited are sources from Canada, Mexico, and the North Sea. The counter arguments are that most of these current sources were developed in response to higher prices and are relatively high cost, and that they are nearly as vulnerable to low prices as the marginal exploration prospects and production of the U.S. are. Their ability to

expand to meet rising demand and to offset U.S. production declines is very limited.

3. The U.S. now has a strategic petroleum reserve (SPR) with 500 million barrels in stock and incremental additions being made. Others say the SPR is inordinately expensive and limited at present to no more than 100 days' supply at current levels of imports, and no more than half that level of supply with imports at their expected 1990 level.
4. The U.S. through much greater efficiencies in energy use is less intensive of energy use now than in the 1970's, and future oil price shocks would not result in the economic problems created by the price shocks of the 1970's. The counter argument is that while energy consumption, especially oil, is now less relative to real GNP than in the 1970's, oil use is still pervasive and yet intensive, and that the structure of the U.S. economy now makes it as susceptible to price shocks now as in the past, if not more so.
5. The lessons of the 1970's resulted in the introduction of extensive fuel-switching capability, especially between oil and gas in the industrial and utility sectors. Indications are that between 2 and 3 million barrels a day of capacity is now switchable, and future switching capacity might be greater. The counter argument is that the entire volume cannot be realized because some gas can and will always compete with even very low cost oil, but more specifically that the buffeting effect of reversible use assumes that

gas, now in ready supply, would also be so in the future. Those looking at underlying deliverabilities of gas and current and recent levels of gas drilling see trends for future gas supply as dismal as those for oil.

Recommended Actions

In my judgment the trends established in 1986 and likely to persist will pose for the U.S., energy problems as severe, if not more so, than those experienced in the 1970's. These problems can be averted. The exploration and development experience of the past decade in the U.S., along with substantial geologic evidence, has shown that the resource base for oil, through discovery and through improved recovery by extended conventional development and advanced tertiary processes, is sufficient to provide the U.S. with stable levels of production through the balance of this century and well into the next. This finding is in marked contrast to the conventional but invalid view in the 1970's that decline, once started, could not be arrested and reversed. But, for stable production to be realized, the resource base must be pursued as aggressively as it was in the late 1970's and the first half of the 1980 decade. For that pursuit to occur, prices for oil must generally be in the range that existed in the first half of the 1980's. The question of what price is profitable is always asked. Reference is commonly made to prices of the late 1960's and early 1970's, which were about $10 per barrel (in current dollars) less than now, and which made the oil business profitable. There existed then as there exists now some low-cost production that could be profitably pursued at lower prices, and there existed then as now some wildcat exploratory prospects that could be profitably pursued at low prices. But, there was not then and is not now sufficient volume of low-cost production nor sufficient number of attractive exploration prospects to provide for reserve replacement to keep production levels stable. In the profitable days of the late 1960's and early 1970's, oil drilling was at a level that yielded annual reserve additions of no more than one-quarter the level of production. Prices and corresponding levels of drilling activity in those days set up the domestic production declines of the 1970's and the resulting import increases and price shocks. At today's prices, drilling is only 40 percent the level necessary to stabilize lower 48 production; the history of the 1970's is being repeated.

Although a variety of proposals exist to revitalize the oil exploration and production capability in this country, the most effective approach would be to impose a variable tariff on all crude oil and product imports. The amount of the tariff should be the difference between the current price and a set level of $26 (constant) per barrel. Such action would allow sufficient activity to maintain relatively stable production and to limit import levels. Threats to national security due to vulnerability would be reduced, balance of trade deficits would be reduced, and, importantly, the prospects for future price shocks leading to inflation and economic instability would be minimized. An alternative to an exclusive import tariff would be a tariff at a reduced level, say $5 per barrel, combined with tax incentives and credits to achieve a sufficient, effective price, equivalent to levels of the early 1980's.

Imposing an import fee would reduce the short-term benefit of lower prices but protect against high and disruptive costs later. It is an insurance policy this Nation can ill afford not to have.

STATEMENT OF THE HONORABLE J. BENNETT JOHNSTON, U.S. SENATOR FROM THE STATE OF LOUISIANA

Senator Johnston. Thank you very much, Mr. Chairman.

I am certain that things have been said that are well-known. I think they bear repeating.

According to the Petroleum Intelligence Weekly of last week, we have lost a million barrels a day since February of 1986, including natural gas liquids. A million barrels a day.

Our dependence on foreign crude is almost precisely what it was in 1973, only in 1973 we did something about it—we began to do a lot of drilling. Now we are going in exactly the opposite direction.

In Louisiana in the last year we lost 23,000 jobs in oil and gas. Many of those are some of the most skilled people in oil and gas—the geologists, people who are running the mud companies, the plank road companies, the helicopter companies, the drill bit companies, all of the service industries as well as the direct drillers. We have lost 23,000 direct jobs and many thousands more in indirect jobs.

Now, the point I am making here is not that we have acute misery in Louisiana. We do, and it is as bad as the Great Depression; in fact, it would be worse than the Great Depression were it not for food stamps and unemployment compensation and Social Security, and those so-called "safety net programs." And by the way, there are great holes in those safety nets in Louisiana. Nevertheless, it is the only thing that is holding that state together, literally.

But my point here is not to tell you about the misery, but to tell you about the direction we are going in. We are dismantling the domestic energy industry in my state, and I think the same thing is true in Oklahoma, bit-by-bit, piece-by-piece, and rapidly. It is like a balloon filled with hot air. You take away the heat source, and it begins to crumple, and crumple fast. That is exactly what is happening to the domestic oil industry.

There are virtually no new exploratory wells being drilled in Louisiana. Now, the only ones being drilled are those that you have to drill, either to keep the lease or they are infield drilling—you know there is oil and you know there is gas there, and then it becomes economical to do so.

But as far as wildcats, you can forget it. They have been forgotten in my state and across the country. You have seen the latest figures of the major companies on their profits—way down. If you look at their profits from exploration, it would be virtually nonexistent. The profits from the major companies are now in refining and distribution.

Last year we had 245 operating rigs in Louisiana, which was way down from the previous year in Louisiana. This year we are down to about one-half of that, 127 rigs. And again, these are all infield drilling.

The demand is up, of course—2 to 3 percent this year. The trend will continue in that direction.

So, really, what we have to do in this country is ask ourselves a fundamental question: Can we keep a domestic oil and gas industry in the direction we are going? And the answer is No. There is not one person that I have heard that says you can keep a domestic oil and gas industry with prices like they are now, even if the $18-a-barrel holds, and I think that is very much open to question. But you just cannot keep the industry; it will continue to deteriorate.

Will the free market solve the problem? Will the invisible hand come to the rescue? Can you rely on laissez faire? Again, the answer is No.

And the next fundamental question is: Well, why don't you let those areas of the world produce the oil that have the comparative advantage? That is what they teach in the economics books. They can lift a barrel of oil in the Middle East for a dollar a barrel, and they have huge supplies, "Why don't we let them do it?"

Well, there are a lot of people who say, "Let them do it. Don't worry about it." Those who say that don't know anything about history, don't know anything about the dynamics of the Middle East right now.

One of the reasons I have been terribly upset about the so-called "Irangate" affair is that it makes it more likely that Iran will win the war in the Middle East. And we all know what the implications of that are. Iran, even under the Shah, was bullish or hawkish, shall we say, on prices. They always wanted to raise the prices more.

The difficulty with OPEC as a cartel is that they lack discipline, becuase some of their members cheat. Now, what do you think is going to happen with Iran, if and when they win that war? They will control their supply, they will control Iraq's supply. They are next-door neighbors to Kuwait, and they are going to control Kuwait. They will control Saudi Arabia; Saudi Arabia is already intimidated by them. Indeed, they will control that whole Gulf Region—not by compromise, not by persuasion, but by demand. They will control it, and they will be able to say, "Your quota will be such-and-such, Saudi Arabia," and Saudia Arabia will have to dance to their tune, unless we are willing to send in the Marines, and I don't believe we are.

So, what does that mean? It means that our only lifeline, our only help in time of need, is our own supply, the Strategic Petroleum Reserve and our domestic energy supply.

Former Secretary Schlesinger testified before our committee last week that a very prominent Arab OPEC oil minister told him privately that history is going to curse this country for dismantling its domestic oil industry. I happen to know who that was, a very well-known Arab oil minister. And he is dead right.

I will tell you this, Mr. Chairman, history may curse us, but I know you and the two Senators from Oklahoma are going to do your part to at least set forth the facts. And I am going to do my part. I don't know what the Congress is going to do, I don't know what the major companies are going to do, I don't know what the President is going to to; but, when and if three or four years from now the price goes to $50 or $60 a barrel and we don't have a domestic oil industry, they are not going to point the finger at me.

Now, for the life of me I cannot understand why the major oil companies in this country oppose an oil import fee. I know some are for it and some are against it. And I hear their reasoning: "Well, if we get into an oil import fee, we are likely to get an entitlements program." I can tell you, the quickest route to an entitlements program is to let that price go to $50 a barrel. That is the way you get an entitlements program.

You are not going to get an entitlements program or a totally bad oil import fee—we may not be able to get an oil import fee, but with David Boren on this committee, with Lloyd Bentsen the chairman of this committee, and other strong and intelligent people who are really, if not in control, at least in influential positions, I don't know whether they can pass the fee, but I know they can defeat it if it is a bad fee.

So, my message to major oil companies is, "Get on board while there is a chance. We may not pass it, but get on board, because it is the only thing that will work."

Our people at home in the drilling business tell me they can't drill unless the price is around $22 a barrel. That is the figure that is used more than any others. Some say $21. Of course, not all prospects come on line with the same price. Some are not economical until you get to $30 a barrel. But you begin to be able to drill, and you begin to be able to preserve that industry and keep the payrolls going and keep the people employed, at around $22 a barrel.

But the problem is, you have got to have confidence in that $22 a barrel. I mean, when it hits $22, everybody doesn't say, "Well, let's go drill." They say, "Well, what is going to happen next week, next month, six months from now, when OPEC starts cheating? The price is going to go down."

A variable oil import fee pegged to $22 a barrel might collect a little revenue; on the other hand, it might collect $10 billion a year. But at least it would give confidence in that price and preserve the domestic industry. And why we don't do that, I do not know.

I repeat, it is not going to be a bad fee if it passes; it is not going to be all hole and no doughnut; it is not going to be an entitlement program, because we would defeat that, and we can defeat it easily.

But let's try to get it on line. If we do, we preserve an industry; if we don't, we lose it.

Now, there are two other points I would like to make, Mr. Chairman, and that is with respect to the differential for refiners, first of all.

We must have a differential for refiners. I don't know what the exact price would be, somewhere in between $2 and $3 a barrel, depending on how big the fee is. But if you don't have a differential for refiners, of course you give an enormous advantage to foreign refiners.

We know that about 10 percent of the amount of crude goes to supply the energy needs of the refinery. So, you start off with about a 10 percent deficit or a 10 percent premium on foreign refiners if you don't have the differential. In addition to that, the foreigners have lower cost sources of crude. So, we ought to make a differential that at least keeps them even with foreign companies, that does not result in an export of our refining capacity, something that is happening already.

Secondly, I would urge a differential for petrochemicals. This would be a bit more complicated, but really not that complicated, and not that difficult; because, of course, much of petrochemical feedstocks are up as high as 60 percent crude oil. So, if we didn't have a differential for petrochemical feedstocks, then they could in effect avoid the import fee by bulk shipments into this country of petrochemicals, putting our petrochemical industry at a great disadvantage.

It would not be that difficult to design a fee that recognizes the crude oil percentage in petrochemicals. I don't know whether we would want to do it in the statute or let the Department of Commerce to design it for the various different mixes of petrochemicals, but we ought to do that, and we can do it.

I see absolutely no reason to give a differential to Mexico, Venezuela, or Canada—good friends and partners in this hemisphere. We should not do that, because by putting on an oil import fee we wouldn't be capturing their market share, we wouldn't be taking away their market share. Rather, all we would be doing is preserving as well as we can our own market share. Our own market share is being taken by other countries, whether OPEC or Mexico or Canada or Venezuela, because as we go down a million barrels a day, as in the last year, somebody rushes in and takes that market share. And indeed, by 1990, at the rate we are going, we are going to be dependent for 50 percent or more for our exports.

I would also hope that we would not need an exemption for home heating oil in the Northeast. I think a better way to do that is to combine an oil import fee with the gasoline tax. We are going to need that much revenue, I can tell you. We are not going to make the $108 billion Gramm-Rudman target, and anybody who thinks we are either doesn't know the facts of budgeteering or is trying to fool the American public for political advantage. We can't reduce that deficit by $50 or $60 billion, and if we could, the economists would tell us we shouldn't because it would stifle the recovery, and it would probably put us in a recession.

But to get half-way there, we are going to need some revenue, and some serious revenue. So, a gasoline tax balanced with an oil import fee, I think, would be fair. It would be regionally fair, because we drive more in the South and the West, and they use home heating oil in the East. And I think that is where the compromise ought to be made.

So, Mr. Chairman, I have gone on too long. But I want to thank you for your leadership on this vital issue. It really is a vital issue, and it is a job of education. We have got to educate the Administration. I have no doubt at all that those in the Administration who are making the study agree with just about everything I have said. They haven't told me they are for an oil import fee; they are prohibited from saying so. Indeed, they have told me they are prohibited from saying so. But the facts are undeniable.

We had better get the word out while there is time.

Maybe Iran will win that war and save us, and the price will go up without having to have an oil import fee, but I doubt it. I think you are going to have a stalemate for a while, and in the process we are going to dismantle this industry unless we do something about it. The time to do something about it is now.

I thank you for the opportunity to be able to say so.

[The prepared statement of Senator Johnston follows:]

STATEMENT BY SENATOR J. BENNETT JOHNSTON
BEFORE THE SUBCOMMITTEE ON ENERGY AND AGRICULTURAL TAXATION
COMMITTEE ON FINANCE

January 30, 1987

Mr. Chairman and Members of the Subcommittee:

Domestic crude oil production plummeted last year, going from 9.056 million barrels per day in January, 1986, to 8.350 million barrels per day in January, 1987.

If you add in natural gas liquids, we lost a million barrels per day of production last year, according to Petroleum Intelligence Weekly (Jan. 19, 1987).

The situation is likely to continue to deteriorate.

Most of the production we have lost won't come back. Once a stripper well is shut in, for example, it is shut in forever. Production from Prudhoe Bay, which represents about 20% of our domestic supply, will begin to decline significantly around 1990. And we are doing nothing now to replace that production.

We are losing our ability to increase production once prices recover because of the fact that we are dismantling our domestic production and exploration capability. That seems to me to be especially disturbing.

One need only look at the shape of Louisiana, our nation's third largest producer of oil and second largest producer of natural gas, to see the tangible effects of this. Mr. Chairman, 62 of Louisiana's 64 parishes are involved in oil and gas production. In January, 1986, 76,200 individuals were involved in oil and gas extraction activity. In January, 1987, that number had decreased to 53,000, meaning that in a one year period, we lost 23,000 jobs that were directly related to production activity and many, many thousands more in secondary and support industries.

Activity of this nature has given Louisiana the dubious honor of having the nation's highest unemployment rate--13.7 percent. This rate is more than twice the national rate of 6.7 percent--and in sections of the state that are most directly involved with oil and gas and petrochemical production, the rate is even higher. For example, in Vermilion parish, the parish that produces the most oil and gas, unemployment is currently 21.6 percent. That means that more than one out of five people have lost their jobs in the past year. In LaFourche and St. Mary parishes, two other large oil and gas production areas, the unemployment rate is 18.4 percent and 23.6 percent, respectively.

This bleak economic condition is directly related to the recession in the oil and gas industry and the loss of domestic production activity. For example, as of last week, only 127 rotary drilling rigs were operating in Louisiana. One year ago, we had 245 rigs in operation. In other words, 49 percent of the rigs that were operating a year ago today are now idle.

New geologists are not going to school; those who are already trained are turning to other lines of work. Mud companies, helicopter companies, drill bit companies, pipeline manufacturing companies -- all of the service industries -- are being dismantled bit by bit and piece by piece.

The other side of the equation shows increased demand. A simple 2% annual increase in demand would take our needs from 14.5 to 16 million barrels per day in five years.

The gap between production and demand would have to be filled by imports. Imports under those assumptions (8.872 mb/d) would be 55% of our supply. And those are very conservative assumptions.

It's important to keep in mind that in 1973, when we faced the terrible oil embargo and the gas lines, we were dependent for imports for only 39.4% of our supply. Domestic production then averaged 9.2 mb/d; net imports were 6.0 mb/d.

We are just as dependent today as we were then. The first week of this year shows domestic crude production at 8.3 mb/d and net imports at 5.4 mb/d -- up 13% from a year ago -- for an import dependence level of 39.4%, the same percentage as in 1973. A simple 3% annual decline in domestic production would mean that we would be producing 7.128 million barrels per day five years from now.

What we seem to be doing is sowing the seeds for the next crisis.

And where can we turn when that crisis comes? Unless we do something here at home we will have nowhere to turn but the Middle East. And that is why I find the situation to be so disturbing.

Last week, the Energy and Natural Resources Committee had a top secret briefing on the world oil outlook from the Central Intelligence Agency. And then we heard from two world-renowned experts on the situation: James Schlesinger, Former Secretary of Energy and Defense and former Director of Central Intelligence, and James Akins, former Ambassador of the United States to Saudi Arabia.

All of the experts are profoundly disturbed about the recent revelations about the United States involvement with Iran and about the potential consequences for the world oil outlook of the potential collapse of Iraq. If Iran defeats Itaq, Iran could become the dominant force in OPEC. That would have profound implications not only for energy policy, but for the very stability of the Middle East.

But our very dependence on the Middle East for oil -- and growing dependence at that -- already limits our foreign policy options in the Middle East. If we were over 55% dependent on oil imports, and if half of those imports were to come from the Persian Gulf, actions such as our raid to discipline Khaddafy could have much more negative consequences.

We must pay attention to OPEC. For we have seen the dramatic consequences of changes in Saudi Arabian production policy on all the world's oil producers, OPEC and non-OPEC alike.

Thus far, the December OPEC agreement to limit production to 15.8 mb/d, and to charge a fixed price of $18 per barrel (with differentials) appears to be sticking. The cold weather in Europe has meant that some cheating -- which is already happening -- can be tolerated. But what if the agreement falls apart? Spring will be the test. Significant cheating would lead to Saudi disciplinary production increases. That in turn would lead to another free-fall of oil prices. But who knows how far prices would fall? Production from marginal, high priced producers such as the United States would be hurt again.

Volatility is the watchword of the day.

We must pay attention to the Middle East. For nowhere else are oil reserves of any significance available and ready to be produced. Even more significantly, there is no other place in the world where the reserves are so big and the cost of production so small. It is highly unlikely that there are any such oil deposits left to be discovered anywhere. Persian Gulf oil almost certainly will be the world's most abundant and least costly conventional reserve for the remainder of the oil era.

We must pay attention to our domestic oil industry. I personally believe that an oil import fee would go a long way towards solving many of the ills of our domestic industry, while helping us to keep our dependence in line. It represents the only effective policy option I know. Revenues derived from such a fee would help our Federal budget deficit problems, and would help us to meet the Gramm Rudman deficit targets. It would also help slow increases in consumption and return us to a conservation minded Nation. For those reasons, I am an enthusiastic supporter of S. 302 and congratulate my colleague from Oklahoma (Mr. Boren), the Subcommittee Chairman, for his leadership in this area. I hope that we can garner some additional support for this vital piece of legislation.

Any import fee should include a differential, or higher fee, for product imports. Such a differential is necessary to protect our vitally strategic refining capacity for two reasons:

First, foreign refiners will have access to lower cost crude supplies, and can capture a huge margin within the confines of the fee;

Second, refineries use up to 10% of their purchased crude as energy input to run the refinery itself.

In addition, I would urge adoption of a differential on imported bulk petrochemicals. Otherwise, the fee could be circumvented to a significant degree through bulk chemical imports.

Finally, much has been said by opponents of a fee about the so-called adverse impacts that a fee would have on U.S. industry. Without arguing the question of whether or not those impacts would be adverse, I believe this argument misses the point. We should not be comparing our competitiveness today without a fee, versus tomorrow with a fee. We should be comparing our competitiveness tomorrow with a fee versus five years from now with no oil.

I appreciate the opportunity to testify today and thank the Chairman of the Subcommittee, and the other witnesss, for accommodating my scheduling problems.

Senator **Boren**. Thank you very much, Senator Johnston. I think everyone can see why we feel fortunate—not just from an Oklahoma point of view or a Louisiana point of view but from the point of view of the national interest and the national security—to have you now serving as Chairman of the Energy Committee, with your deep understanding of this issue.

I want to turn back now to the panel and ask Dr. Ebinger if he would proceed with his testimony at this time. Again, I express my appreciation to you for taking time to be with us here this morning.

STATEMENT OF DR. CHARLES EBINGER, GEORGETOWN UNIVERSITY CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES, WASHINGTON, DC

Dr. **Ebinger**. Thank you, Mr. Chairman.

Mr. Chairman, based on the events of 1986, the future energy security of the nation is in serious jeopardy. I won't bother the committee or the audience with a recitation of all of the events that have occurred that are in my testimony, because I think they have already been well covered. But let me just hiqhlight several points that I think perhaps have not received all the attention they should.

First, in regard to oil and gas production, what may well occur, if we do not have an oil import fee, is that by late spring or early summer the price may drop to $13-14/bbl as the OPEC agreement unravels, as Iraq has a new export pipeline to the 500 mile Mediterranean, and as I fear, the U.S. economy gets thrown into ever-deepening economic trouble.

Likewise, I think, Mr. Chairman, on the issue of natural gas one has to conduct a serious examination of what may happen to the assumptions currently prevailing in the electric power industry about the role that natural gas will play in the future of the electric power sector, both in combined cycle plants and as a fuel for cogeneration, if gas production fall off preciptously in the months and perhaps the years ahead as a result of sustained low oil prices.

I think this is a time bomb that is waiting to drop on the country, and Senator McClure raised this issue last year in some hearings he had in the Senate Energy Committee regarding the future electricity needs of the country.

Likewise, I think we have to examine the impact that the crash in oil prices unleashed by Saudi Arabia and Kuwait has had on residual fuel oil demand. It is my expectation, in the low oil price scenario that I think may well be upon us, that we will see imported residual fuel oil once again undercut the demand for other domestic fuels, particularly natural gas and domestically-produced coal.

I would like to agree with Senator Johnston very clearly: I think the whole range of issues confronting the U.S. refining sector demands immediate attention.

While all of these issues are not directly related to the fall in the price of oil, he has noted the differential in feedstock prices that some of the OPEC countries enjoy over domestic refiners. But I would also like to call the committee's attention to the added costs domestic refiners receive from pollution abatement and lead phasedown requirements. I don't think anyone in the refining industry is arguing that these are not worthy goals, but rather that the differential costs incurred by the domestic industry should somehow be offset so that we do not close down more domestic refining capacity; thus, not only seeing a rise in imported crude oil but also ever-increasing levels of imported petroleum products.

I think we need to understand in this country that, were gasoline demand to pick up or sustain itself the way it did in the second half of 1986, it may well be impossible for the domestic refining industry to meet that need, and this will only exacerbate the import problem that many other witnesses and the committee members have addressed today.

Likewise, in the contract drilling industry we have heard how that has been devastated, and I think we must give serious thought to tax provisions and other measures that might encourage continuation of looking for oil and natural gas, particularly in those areas—and I say this with all due deference to Oklahoma and Louisiana—particularly in some of the higher cost areas as offshore California and in the Arctic Regions of our nations where particularly high costs are needed to justify such drilling.

I would like also to comment on the fact that I think we should also not forget in our discussion of what has happened to the domestic industry, and more broadly defined, that we have seen a devastation of the alternative fuel industries in this country, and I hope that this committee and other important committees of the Congress realize, if you don't want to open the tax debate once again for all the loopholes, you ought to at least examine some measures that might continue to develop alternative energy sources in this country while we protect and aid the domestic oil and natural gas industry.

The figures that are confronting the nation in terms of a level of oil imports have been quoted. We have heard figures of 8–9 million barrels a day by 1990. I certainly would agree with those, but I would want to emphasize that every increase of one million barrels a day, even at today's oil prices, adds something in the neighborhood of $6.5 billion to the nation's trade bill.

So, if we are talking about perhaps going up to 3 million barrels a day between now and 1990, even if we make success in our trading areas with our trading partners, we will have offset that largely by allowing oil imports to rise.

This leaves me, Mr. Chairman, just to highlight a few additional remarks, because I think some of the other witnesses have not touched on these:

The fact is that rising imports do have additional costs for the nation. As my colleague Dr. Schuller has testified on many occasions, as I have myself, obviously rising oil import vulnerabilities to the Middle East constrain our diplomatic flexibility, they cause serious strains in our alliance relations with Europe and Japan, who are also dependent on that important area, and they have major impacts on the nation's balance of payments, which I go into in some detail in my testimony.

Since my time is up, let me cut off there. I will be delighted in the question and answer period to go into any of these issues.

[Dr. Ebinger's written prepared testimony follows:]

Statement by Dr. Charles K. Ebinger
Director of the Energy and Strategic Resources Program
Georgetown University, Center for
Strategic and International Studies

Good Morning, Mr. Chairman,

I am Dr. Charles K. Ebinger, Director of the Energy and Strategic Resources Program of the Georgetown University Center for Strategic and International Studies. While I am delighted to have the opportunity to share some thoughts with you this morning on the national security problems posed to the nation by rising oil imports, I must confess that having testified before numerous Congressional committees on this issue over the last decade, I am saddened that this great nation still has no national energy policy. I hope these hearings you are sponsoring today, for which I commend your courage in keeping this issue on the public policy agenda, can begin to reverse this situation.

Mr. Chairman, based on the events of 1986, the future energy security of the United States is in serious jeopardy. A quick review of what happened demonstrates the devastation that has occurred in the U.S. energy producing sector.

- U.S. oil production fell by nearly 800 mbd, with further declines of 300-500 mbd likely in the U.S. in 1987 at current prices of around $18/bbl. If oil prices fall once again in the late spring or early summer, as I believe they will, further decreases are likely.

- Natural gas reserves, which fell 18% in 1985 when oil prices were $26/bbl, fell even more precipitously in 1986 in response to a fall-off in drilling activity unleashed by low oil prices. At current price levels, the U.S. natural gas bubble may disappear as early as 1988.

- The crash in oil prices, unleashed by Saudi Arabia and Kuwait, led residual fuel oil demand to increase for the first time in almost ten years as imported resid prices in some markets undercut the price of domestically produced coal and natural gas.

- Kerosine jet fuel demand rose to its highest annual demand in history.

- U.S. refinery capacity came under renewed threats from foreign imports owing to the outmoded U.S. gasoline tariff structure and U.S. pollution abatement and lead phase-down requirements which add a cost of about $2/bbl to U.S. refiners' costs compared to costs to foreign refiners.

- U.S. refinery utilization rates already exceed the historic sustainable rate of 85 percent of crude distillation capacity. The downstream conversion units used to make light products demanded by the U.S. market are already near maximum capacity. If gasoline demand in 1987 rises as fast as it did (4%) in the second half of 1986, we will have to import more gasoline in 1987 to meet this demand.

- The U.S. contract drilling industry and service sector for oil and natural gas has been devastated. The number of oil wells drilled in 1986 fell by about forty percent. This decline of more than 25,000 wells will soon be statistically reflected in a plummeting of our domestic oil and natural gas reserves. From 1981-85, the U.S. drilled nearly 80,000 wells a year (oil, gas, dry holes) just to keep reserve/production ratios steady. With the fall off in drilling activity, we will see a further decline in U.S. energy security.

- In 1986, nearly 150,000 people in the U.S. energy industry lost their jobs.

- Tax credits for most alternative fuels have nearly disappeared.

- U.S. oil import dependency is now nearly 40 percent. Based on current trends, U.S. oil import dependency could reach 50% by 1990 and perhaps 60% by 1995. Oil imports of 6 mmbd in 1986 may rise to 8-9 mmbd in the early 1990s and up to 11.5 mmbd in 1995. At $18/bbl average cost, each [illegible] mmbd increase in U.S. oil imports increases the U.S. trade deficit by $6.5 billion. We must not let this happen, but begin to embark on policies to hold the growth in oil imports down as much as possible.

Mr. Chairman, for the last six years the Reagan Administration has fostered a belief in the minds of the public, the media and large sections of the business and government community, that market forces will solve the energy crisis of the nation if only left unfettered by government interference.

The fact that so many people believe the energy crisis is behind us is particularly vexing in light of the fact that history has repeatedly demonstrated that excessive dependence upon oil imports threatens the broad range of U.S. national security interests defined by both legislative enactment (Section 232 of the Trade Expansion Act of 1962) and executive findings by the Treasury Department in 1975 and 1979. The official documents of the U.S. government since 1973 clearly demonstrated that some members of Congress and at least three U.S. Presidents - two Republicans and one Democrat - have recongnized that the overall threat of energy dependence on foreign sources of crude oil and petroleum products arises not only from the occasional burdens placed upon military preparedness encountered during supply disruptions, but also from the threat posed to both the domestic and international economy even when supplies are available through price manipulation. Clearly, the first line of defense against such economic manipulation must be continued support for a vigorous domestic energy program encouraging energy production as well as enhanced energy efficiency.

The links between energy and national security are multifarious. First, international competition for oil, especially in times of real or perceived crisis, strains foreign policy flexibility and political and diplomatic alliances as nations move unilaterally rather than in concert to secure access to vital energy supplies.

Reliance on insecure oil supplies impinges on the military security of the United States and its allies in several other areas. Safeguarding major oil producing states against external and perhaps even internal subversion requires difficult strategic choices. The military must have the bases and operational mobility it needs to move rapidly to protect against the threat of sabotage of the energy logistics system inside the major energy-exporting nations and on the high seas. The military must also position adequate fuel supplies for the defense of Europe, Japan and the United States, as well as to support allied interests in other conflict arenas. The West's ability to support sufficient military forces to guard oil supplies in an era of fiscal austerity is also a source of profound allied squabbling and necessitates a greater amount of burden sharing and a reexamination of whose strategic interests are most at stake in volatile areas such as the Persian Gulf. With Japan dependent, according to the EIA, for nearly 67 percent of its imports on oil from the Middle East and OPEC and Europe 74 percent dependent, it is clear that the economic threat posed to the domestic energy idustries of these regions by the collapsing prices of the 1980s, is as great as the rising prices of the last decade. Likewise, with Japan dependent on the Middle East (defined to include the Arab exporters of North Africa) for 58 percent of its oil imports (2.6 mmbd out of 4.5 mmbd) and Europe for 59 percent (4.6 mmbd out of 7.9 mmbd), it can no longer be credibly argued that the U.S. alone should shoulder the defense burden required to insure access to the Persian Gulf and North African oil.

The security of the United States and its allies is also threatened by large oil import bills which pose grave problems not only for Western Europe, Japan and the United States, but also for the aspiring nations of the Third World. In this latter case, the prospect for more equitable income distribution, as well as their political and economic stability are directly linked to the price of oil. While low oil prices have provided some relief to some of these nations, a reversal of import substitution policies in the energy sector could pose still another shock to their economies and to the stability of the international banking system were oil prices to rise dramatically once again in the 1990s.

To demonstrate how rapidly changes can occuring the economic dimension of the energy "crisis", one has only to look at the historic record of U.S. net oil import bills:

	Imports	Cost
1973	6.26 mmbd	$ 8 B
1979	8.4 mmbd	60 B
1980	7.0 mmbd	79 B
1985	5.13 mmbd	54 B
1986	5.9 mmbd (est.)	35 B
1990	9 mmbd (est.) at $24/bbl	79 B
	at $18/bbl	59 B

Energy and national security are linked in another way: political, economic and environmental conflicts over energy development, conservation, and end use engender uncertainties over future economic conditions and the supply and cost of energy, thus constraining investment and the prospects for enhancing industrial productivity. To the extent that the "regulatory" climate emanating out of Washington, our state capitals or local public utility commissions constrain fuel efficiency, the nation's reliance on foreign oil will resurrect its ugly head and our national security and that of our trading partners will be impaired. Likewise, to the extent that the Chernobyl nuclear tragedy leads to a slow-down or curtailment of nuclear power in any OECD nation, the security of all of our nations will be lessened.

The challenge posed to the U.S. is stark. Over the last fourteen years, U.S. dependence in imported oil has been dramatically reduced by arresting the decline in domestic production through the oil industry's investment of $335 billion in exploration and development, including $36 billion in lease bonuses paid to the Federal Government for offshore drilling rights. Billions more have been invested in the development of high cost coal and nuclear power plants, the natural gas industry and in abortive attempts at synthetic fuel development. Further investments have been poured into enhanced energy efficiency in the U.S. commercial, residential and industrial sectors.

Unfortunately, the deliberate manipulation of world oil prices by several OPEC members has reduced the value of these investments in the petroleum sector to a level which is inadequate to provide the required cash flow and the incentive to maintain adequate levels of domestic activity. In 1959, nearly

30 percent of oil and natural gas revenue generated at the wellhead was plowed back into new oil exploration. By 1971, this had fallen to 13 percent, in July/August of 1986 this had plummeted to 7 percent. Given these figures, it is clear we are once again headed for excessive dependence upon insecure imports.

The national security threat implicit in these statistics and those for Western Europe and Japan cited earlier can only become worse as the exporters' price manipulation denies the required investment in U.S. energy exploration and development and frontier petroleum operations from the Northt Sea to the Beaufort Sea.

Inevitably, benign neglect from Washington will mandate that the growing shortfall in free world oil supplies will be met by greater dependence on OPEC, especially the Middle East. It is my belief that this fate is increasingly inescapable under a low oil price scenario because oil users will turn first to installed but currently unutilized oil production capacity, over 95 percent of which is located in OPEC countries and at least 85 percent in the Middle East. When the output of currently unutilized production capacity is absorbed, non-communist consumers will turn next to the development of proven but underdeveloped global oil reserves, over 76 percent of which are located in OPEC (476 billion barrels out of a free world total of 623 billion) and 69 percent in the Middle East (433 billion barrels).

The policy choices before the United States are stark. Either the nation moves forward in a concerted manner to develop its domestic energy alternatives while taking measures to secure access to vital energy supplies or it will remain at the mercy of more parochial interests, both at home and abroad, and thus lose control of its economic, political and strategic destiny.

Thank you Mr. Chairman.

Senator **Boren**. Thank you very much, Dr. Ebinger. I think the comments you make on trade are certainly appropos. As you know, the Finance Committee will be considering major comprehensive trade legislation proposals this year.

I think that, in addition to looking at the energy problem from a tax point of view, it is certainly appropriate that it also be a very, very important element in the debate over any trade legislation which might be considered by the Congress this year.

Let me ask all four members of the panel to perhaps comment further. As I heard you testify, there have been varying predictions about what might happen to oil prices over the next 12 months. Some predict that they might collapse again, others predict that they might rise or think they might rise to the $20, $22, $23 level. I think much of that depends on the imponderable situation in terms of what will happen with OPEC and whether the discipline will hold, and the outcome of events in the Middle East.

But without regard to what happens to prices, I would ask for comments from each one of you on what are the dangers posed to the domestic energy industry simply by the volatility of prices, at whatever level they might currently be.

We have heard Senator Chafee talk about how his region would be hurt if oil prices were to go too high. But is any region of this country helped by the extreme volatility that we have seen in oil pricing in recent months?

I might just go down the panel and ask for your comments about the volatility question and perhaps your suggestions for dealing with it.

Dr. Verleger?

Dr. **Verleger**. Thank you, Senator.

I think that the volatility problem is one of the essential concerns, or should be one of the essential concerns, of energy policy in the United States. As you know, I testified two years ago that I saw the price going as low as $10 and as high as $50 twice between now and the end of the century. I have no reason to change that forecast at all.

I think I agree with Charley Ebinger and Henry Schuller that there is a risk of disruption in the market, and that it will send the price up. However, prices will fall again as the economic consequences of the very high price are felt.

That is why in my testimony I place very strong emphasis on building a much larger stockpile. If one examines a number of commodities, as I am doing at the Institute, one finds that the level of inventory has a direct impact on the volatility of the price of a commodity. Today there are no surplus inventories of crude oil. This fact leads me to try to answer your question concerning oil prices.

I think the $18 price will hold, that OPEC will be able to reestablish the term price structure and that prices will remain at roughly $18, I think for two reasons:

One, the cartel received a very nice Christmas present from the U.S. Department of Energy when DOE announced right after Christmas that U.S. production had not declined by 300,000 barrels a day but 800,000 barrels a day. That is oil that comes directly from OPEC, and that means now that the cartel has a market for something like 17.5 to 18 million barrels a day of crude oil for this year. The increased demand is enough to stabilize the price.

Second, the cartel has received support from our NATO ally Norway, from Mexico and even from the USSR, in reducing production to support prices.

Third, I think we have drastically overstated the level of inventories that are sitting on the high seas. If you examine U.S. Department of Commerce statistics on oil imports and compare them with the Department of Energy, you find that Commerce indicates our imports last year were 600,000 barrels a day higher for the first 11 months than were reported by DOE. Historically, we have found a difference of 100,000 barrels a day. Last year the difference was 600,000 barrels a day. It is my impression and belief that that difference is the result of lower domestic production, which is a calculation mistake at DOE. It means that the stock buildup that everybody has been talking about in the world market of 150 million barrels isn't there.

So, without these inventories, absent any break in the Iran-Iraq crisis or a continued stalemate, between Iran and Iraq, I think the price will hold at $18. If Iran breaks through with Basarah, the price could go considerably higher.

Senator **Boren**. With the building inventories, do you have any other suggestion in terms of establishing a price stability?

Dr. **Verleger**. Yes. As I said in my testimony, I think that the concept of a floor price of oil is correct. I would not do it by a minimum import price, because I think the administratability of that is impossible.

I think, however, that a statement or a passage of legislation which required the price to be at some level—take the King at his word and use $18 a barrel—would do wonders in terms of encouraging banks to begin financing investment; if the investors know that on average they are going to net $18 a barrel, the investment will come through.

It is clear, from the companies I have worked with and the people I have talked to, that the price volatility has substantially reduced investment.

Senator **Boren**. Dr. Schuler, you mentioned this very point and talked about the difficulty of capital formation, with volatility, and suggested a floor. What kind of a floor level would you propose?

Dr. **Schuler**. Senator Boren, it appears from discussions I have had with people in the industry—and not just in the oil and gas industry but in the alternative fuels, natural gas and others as well—that it looks to be something in excess of $20 a barrel.

Now, if you are looking at investment in the Beaufort Sea, you have got to get it closer to $30 a barrel. If you are looking at enhanced oil recovery in California, you probably have to get it closer to $24 a barrel for West Texas, because the quality discount for heavy California oil would otherwise reduce it to a level that won't do the job.

Interestingly enough, the leading Japanese energy economist at our conference earlier this week talked in terms of $22 to $25 a barrel being the optimum level. Now, I find this interesting, because Japan has no oil production and is hardly interested in it for that purpose, but this is a level that he foresaw. Now, that doesn't say that he suggested we should put an oil import fee at that level or something, or a floor price at that level; but it is, I think, something in excess of $20 a barrel.

Senator **Boren**. You talked earlier about an international agreement. Do you see some signs that there would be more receptivity to that sort of agreement than perhaps there was a couple of years ago?

Dr. **Schuler**. There will be great reluctance, I'm sure. I would not be candid to deny it. And there was great reluctance in 1976. And the way that Dr. Kissinger sold the fee in 1976 was that OPEC had moved the price well beyond the $7 a barrel that was adopted. I think that coming in with a floor price after OPEC has restored a higher price not only makes it much easier for the domestic political situation but also for the international situation.

Senator **Boren**. Right. It would make it less likely, also, in terms of the domestic political situation, that we would have unworkable additional regulatory schemes attached to the establishing of some kind of a floor price.

Dr. **Schuler**. You are absolutely right, Senator Boren. It seems to me that the minute we identify a floor price level, assuming it is below where OPEC has set it, that OPEC is simply not going to permit its internal competition and its lack of discipline to drive prices below that. It will be an enormous incentive and target for OPEC to maintain.

So, I don't think we will ever have to actually implement the thing with all the problems that that creates.

Senator **Boren**. Thank you very much.

Dr. Fisher, do you have anything to add on this?

Dr. **Fisher**. Yes, Mr. Chairman. I would agree with the other comments, that volatility in prices would lead to a discounting, and that hurts in terms of the investment community, particularly in the longer lead times on resources.

I would comment, though, that I think it is very much in our interest to have a stabilization of prices, or stability in prices. And I would conclude that, if that is in our interest, we will have to do it. We did it in this country for 40 years with market demand pro-rationing, when we had sufficient swing capacity to do it. We do not have that now, but we do have another avenue open to us, and that is the imposition of an import fee, which has the same net effect of stabilizing, and we can stabilize at a level that is in our interest. And in my opinion that is one of the intrinisic values of the imposition of a fee, is the stability that you would get.

Senator **Boren**. Dr. Ebinger?

Dr. **Ebinger**. I would only add, Mr. Chairman, that I would agree with the concept of a floor price. But I think one has to give very serious examination as to whether there is any hope that our European and Japanese allies would agree to this.

My own assessment is there is absolutely no chance of anything much above $17 or $18 being agreed to, and perhaps lower than that in Japan. I think, when we start talking about prices in excess of $20, we had better at least make sure we understand what the implications would be if we ended up having to put that fee on by ourselves.

Senator Boren. In your opinion, if we were to even talk about $17 or $18 as a floor, around which we could gather some modicum of international agreement, would that be beneficial in terms particularly of stabilizing credit sources and sources of capital, and the impact on the banking system, and the rest of those facts?

Dr. Ebinger. Well, I think Mr. Verleger was implying that it would, and I certainly would agree with that. I think the banks, if they were assured that $17 were the down side, would welcome that development, as I think certainly would everyone in the oil and gas industry.

What I worry about is the idea that seems to permeate some segments of the oil industry, that Saudi Arabia would really like the price to be $22 or $24. I see absolutely no evidence to suggest that, nor do I believe it is in the long-term interests of the Kingdom, as the Kingdom itself has said, to have prices in that level.

Senator Boren. Let me turn to another point quickly. You mentioned the desirability of a differential, if we were to have some sort of a fee, between refined products and crude oil. This is touching on the environmental cost differentials and other factors. If we were to have a differential, what do you think would be a fair amount of differential, if we were to really just cover the cost differential in the refining area?

Dr. Ebinger. The best work I have seen on this suggests that it would probably be somewhere between $2.50 and $3 a barrel. There are some people who have argued it needs to be higher than that.

Senator Boren. Based on what crude fee?

Dr. Ebinger. Simply that the differential would have to be that above whatever crude fee you put on.

Senator Boren. Is there that much variation in actual cost of refining?

Dr. Ebinger. Between the environmental costs, between the regulatory—and it is hard to quantify the regulatory costs, in terms of delay—but also the lower feedstock costs that some of our competitors have, I think that would be a fair figure to use.

Senator Boren. Let me just go down the table and ask if there are any other brief comments from any of the others of you on the concept of the differential and whether or not you think we should have one, and what it should be.

Dr. Fisher. No.

Dr. Schuler. I wouldn't contest that level.

Dr. Verleger. I am afraid I would disagree, for two reasons. On an economic basis, I have not seen compelling information yet to give me a base to argue for a $2.50 fee on products. I don't think the product imports have increased that much.

But more critically, I think the decline in domestic production is a very important national security issue. In the energy arena, it is the paramount national security issue.

Our refining profits last year were reasonably good, the refining margins were fairly good, and transferring $18 billion, which is a $6-fee, into the refining sector would do wonders for investment and new refining facilities but would not get exploration and development, drilling, going.

Pairing the two together might well make it much more difficult to pass any form of a floor price. I think what is really needed is a concern for reducing uncertainty as to the level of prices for exploration and development.

So, I would argue for just a straight fee on crude and products.

I think the other step you take is the suggestion I made on holding inventories against imports, which would actually raise the cost of importing products more than it would raise the cost of importing crude. And that would achieve some of it.

But I think the most important thing is to prevent foreign producers from manipulating the price of oil to drive domestic producers out of business, and one ought to address that first and solve that problem.

Senator BOREN. Thank you very much.

Senator Nickles, do you have any questions?

Senator NICKLES. Mr. Chairman, just very quickly.

Dr. Verleger, you mentioned something we haven't heard before, at least in the Energy Committee, and that is a possible requirement for companies or importers to stockpile a certain number of days. Would you care to amplify that?

Dr. VERLEGER. Yes, sir, I would be happy to.

Senator NICKLES. Just briefly.

Dr. VERLEGER. I think I testified several years ago when I was at Yale on that before the Energy Committee, but ideas die quickly here.

In Germany and some other European countries, companies are required one way or another to hold oil against the imports they bring in, 50 days of supply or 100 days of supply. The Germans formed a nonprofit public corporation to actually own the oil, and the companies pay the overhead of it.

I believe, since the real vulnerability of the economy is to a sudden change in the availability of the supply of oil. A sudden change in supply won't lead to gasoline lines if the market is allowed to work but will lead to much higher prices and great economic distortion. Large stocks which can be used to supplement supply in such cases would slow the increase in prices.

Senator NICKLES. And those companies have to do it, though, in the form of—what?—tankers? Or storage facilities?

Dr. VERLEGER. That is a problem that I think can be worked out logistically.

Senator NICKLES. Do you think we should mandate to the companies that they would have to do that?

Dr. VERLEGER. We should mandate that it be held. Companies could build their own facilities or they could rent oil. Private storage companies can be created to hold the oil in bond, and that they could rent the supply from it. That is done in other commodities.

Senator NICKLES. Thank you. I haven't heard that before and appreciate your suggestion.

Mr. Chairman, just one final comment.

Dr. Fisher, you mentioned some statistics. I appreciate the outstanding work you have done in trying to guestimate where we have been and where we are going as far as production.

Also, I will tell you what somewhat bothered me. I was looking at Oklahoma's statistics, and we showed average annual production—again, from 1985 to 1986—of 12 percent. But if you did go on daily production, from December to December, you are on target; it was a reduction of 21.9 percent, and that is a nauseating and a scary figure.

Dr. **Fisher**. Devastating.

Senator **Nickles**. It is devastating, and I think it clearly shows—again, Mr. Chairman, I think we almost have to call these hearings, "Wake up, America," or something, to wake people up, to let them know that we are becoming very, very dependent on unreliable sources. I thank you for the hearing, and I thank you, too, for outstanding panelists.

Senator **Boren**. I thank all of you on the panel very, very much. It has been excellent testimony, and it is testimony that I certainly intend to call to the attention of all of my colleagues who were not able to hear it this morning, not only on this committee but in the Senate at large.

Our next panel will be composed of Mr. Charles DiBona, the President of the American Petroleum Institute; Mr. George Singer, the Chairman of the Taxation Committee of the Independent Petroleum Association of America; Mr. Francis Durand, the Chairman of the Taxation Committee of the Texas Independent Producers and Royalty Owners Association, TIPRO; and Mr. Mack Wallace, the Chairman of the Texas Railroad Commission.

Gentlemen, we are very appreciative of all of you being here. I note, again, there are two Texans for one Oklahoman, but we know that Mr. Singer from Tulsa will hold his end of the bargain up very well, and it is always a desire of Texans to be able to associate with Oklahomans; it brings honor and dignity to them, and we know that they are pleased to be in that company today.

We will begin with comments from Mr. DiBona at this time.

STATEMENT OF CHARLES DiBONA, PRESIDENT, AMERICAN PETROLEUM INSTITUTE, WASHINGTON, DC

Mr. **DiBona**. Thank you, Mr. Chairman.

I have a statement for the record, but I would like to give some brief opening remarks.

I might start by saying that Dr. Fisher mentioned some figures. At the beginning of last year we did a survey of our member companies and asked them to estimate what the effects would be of different prices of oil. One of those numbers was $15, which has been the average price over the year.

In that, they showed a decline of production at the end of one year of 900,000 barrels a day. That compares to the 860,000 that DOE is now showing. And those figures showed that at the end of five years, at $15, there was a 2.7 million barrel per day drop, which I think is identical to his figures. So, the thing is on track and is devastating. It would be down to 6.2 million barrels a day by 1991 at that rate.

Last year's drastic fall in world oil prices has set in motion forces that could lead the nation back into an energy crisis. Last year, U.S. oil consumption rose while production, after peaking in February, fell 9 percent by year-end. As a result, the net oil imports rose 26 percent, reversing an eight-year downward trend.

The impact on the petroleum and related support industries and on the nation's future energy prospects has been especially dramatic. For several years before 1986, profitability, capital expenditures in exploration and production, drilling activity, well completions, and industry employment had all been heading downward. Last year, these trends accelerated. Capital investment was slashed, drilling activity hit its all-time low since records began almost 50 years ago, the decline in wells completion was the largest on record—25,000 records.

I am submitting with my written testimony a copy of the recently-completed American Petroleum Institute study "Domestic Petroleum Production and National Security." This study summarizes both a survey of API companies regarding their future plans and a wide variety of supply and demand projections from many other sources. All indications are that the recent basic trends will continue.

[The study was made part of the official committee files.]

Mr. DiBona. In the United States and other non-OPEC nations, oil consumption will increase and production will fall. Some of these projections indicate that, if prices remain low, our nation will be importing around one-half of its oil within three or four years—that's by 1990—and as much as 60 percent by 1995. This increased demand for imported oil will strengthen OPEC.

Today, OPEC is only producing about 60–65 percent of capacity. In the past, when world oil demand has absorbed over 80 percent of OPEC's production capacity, OPEC has been able to raise world oil prices significantly. That is when the disruptions have occurred. This point could easily be reached in a few years.

Assuming OPEC behaves similarly in the future, a 1 million barrel per day increase in U.S. oil imports would raise the world price by about $1 to $2 a barrel, if OPEC were producing at 80 percent of capacity. But at 90 percent of capacity, the price rise would be $5 to $9 a barrel.

Senator Boren. I think that is something that ought to be emphasized. And at what point do you project we would be producing at 90 percent of capacity?

Mr. DiBona. Well, of course, that depends on the price path in the interim. But you would be at 90 percent of capacity within five years at $15 or less per barrel.

Senator Boren. And at that point, once we have that level of dependency and that level of production on their part, would you state it again? How much would they be able to increase the price-per-barrel of oil?

Mr. DiBona. This is a relationship of the percent of capacity that is being used. And at 90 percent of capacity, the world's attempt to get a million barrels more would raise the price by $5 to $9 a barrel.

I think it is very important because, what this says is, even if we can't solve all of the problems in this country—and we can't, because we are going to face increasing imports almost regardless of what we do—the fact that we can constrain it by one million still makes a big difference. So, it is terribly important to do all of the things that we can do, simply because it in itself will make a significant difference at that time.

Well, if imports are in the range of 7–8 million barrels a day at that time—they would be higher, probably—the increased annual cost to the United States for an extra million barrels a day of imports could reach $35 billion. That is just the incremental cost for one year of one million barrels a day, if we were already in that jam.

Higher imports also constrain U.S. foreign policy, increase military costs, and of course to create an increased import dependence would mean greater vulnerability to world supply disruptions, sudden price shocks, and with no quick way to adjust. And we have a number of figures on that.

We could create the biggest recession that this country has seen in the last 50 years with a 10-million barrel cutoff sometime in the future. Those numbers are in the book.

A major oil supply interruption could bring about a recession, as I said, more severe than any experienced in this half of the century. The Government could take a number of simple steps to remove unnecessary impediments to secure domestic energy production. These impediments would include the misnamed windfall profits tax, which is actually an excise tax which discourages domestic oil production but not imports, counterproductive and long-outmoded price and use controls on natural gas, leasing prohibitions on government lands. Taxes should not be further increased, certainly, on an industry that has had one of the highest effects of federal tax rates of any major U.S. industry and has already been seriously damaged by a sharp drop in prices. To impose new taxes would make threatening the energy future even more probable and the potential consequences more serious.

The Government should also avoid costly environmental initiatives that could have a significant negative effect. For example, the Environmental Protection Agency may require a costly reduction in gasoline volatility, in order to reduce atmospheric ozone by an amount too small to measure. As environmental policy, this action would be inconsequential. As energy policy; however, its impact would be great. It would result in an increase in oil imports from the Middle East by 300,000 to 600,000 barrels a day for four to six months each year. The cost would approach $1 billion each year, even after we have made the investment to reduce those numbers, plus additional capital costs for the refineries. It would also exacerbate the trade deficit and reduce U.S. compatitiveness in world markets.

There are other actions that EPA is currently contemplating which also do that.

There is unanimity within the petroleum industry on these points.

Other proposals have been made which involve a more active degree of government intervention in the market, including the imposition of oil import fees or quotas and the adoption of tax relief measures or other incentives for investment in new energy production. These proposals elicit a variety of reactions within the industry. At this point, none of them should be ruled out.

In conclusion, allow me to express API's appreciation.

Senator Boren. Would you say that last sentence again? I want to make sure I heard that.

Mr. DiBona. Well, this is our position: We think that there are a number of things that clearly ought to be done, like eliminate the windfall profits tax. I think you have an additional list in your proposed bills, many of which we would find totally and completely compatible with the position we have taken, which ought to eliminate these impediments to investment. All of those are things which any market economist would see as freeing up the market and making it possible for us to do the job.

But this doesn't solve this problem; we understand that. Therefore, it is appropriate to look to see what further can be done. We see pros and cons in each of those, and we have quite different views among our members. At this point we say, "Let's work on the things that clearly will make a difference, that everybody agrees on. Let's not rule out anything else, and let's continue to look at it and see what best might or might not be done in the future." So, at this point we are not ruling any of those out, and we are urging you to go forward on the many things that are important to get done and that everyone agrees on.

In any case, let me end by simply thanking you for having this hearing. We think it is terribly important, and it is a first step in getting a dialogue started with the American public. Thank you.

Senator BOREN. Thank you very much for your statement. I think there are various points of information which you have given us today, particularly the picture that you paint of the potential cost, the ultimate cost to the American consumer and to the American economy that could be assessed if we allow ourselves to get back in this position of dependence again. That ought to cause every American to pause, including those who live in areas of the country where there is not one single drop of oil production. They are really at jeopardy and at risk far more than I believe they understand at this point, and I think that the figures you have given us clearly indicate that.

Mr. DIBONA. I think the thing that people do not understand is how quickly that can be a problem.

Senator BOREN. I think that is very, very true. And again, out of concern for the soul of my good friend who testified first this morning, I will make sure that I draw those statistics to his attention.

Now, Mr. Singer, we are delighted to have you with us this morning. We appreciate very much your input into these hearings. We will hear from you at this time.

[The written prepared testimony of Mr. DiBona follows:]

TESTIMONY

SUBMITTED BY

CHARLES J. DIBONA, PRESIDENT
AMERICAN PETROLEUM INSTITUTE

BEFORE THE

COMMITTEE ON FINANCE
SUBCOMMITTEE ON ENERGY AND AGRICULTURAL TAXATION
UNITED STATES SENATE

JANUARY 30, 1987

Introduction

Early last year the price of oil plummeted, and it then drifted further downward for several months. Although the price has recovered somewhat from the low levels it reached last summer, it still is about one-third below its level in late 1985.

Inasmuch as the U.S. is a large net importer of oil, a fall in the world oil price provides a large short-term saving for the nation. A $13 per barrel drop in the average price, such as occurred in 1986, reduces the U.S. annual oil import bill by about $25 billion. Of course, not every domestic industry and section of the country benefits from lower oil prices; most notably, the energy producers, suppliers of goods and services to these producers, and the producing states are harmed.

Most people have focused upon the oil price fall's direct benefits and costs to particular sectors over the near-term. However, the price fall has created some dangers for the U.S. and other oil importing nations that have not been adequately recognized. In short, it has set in motion forces that, if unchanged, will substantially increase the oil dependence of the United States and other industrial nations, greatly strengthen the cartel power of OPEC, and result in serious economic and security costs. The following discussion will first explain why this will occur -- indeed why the initial steps in this process are occurring already. The discussion then will address federal energy policy.

Recent Trends in Oil Consumption, Production, and Imports

As Figure 1 shows, the price of oil rose sharply in

1973-1974 during the Arabian oil embargo, and again in 1979-1980 in connection with the Iranian supply disruption. The price peaked in 1981, and then fell by about one-quarter by 1985. Last year saw another sharp decline, bringing the price back to about the 1978 level.

The reactions to the price hikes of the 1970s provide important insights into the likely course of events in oil markets over the next few years. These insights are important because many people in the 1970s underestimated the demand and supply responses to higher oil prices, and many today similarly seem to be underestimating the likely responses to lower oil prices.

In the late 1970s, largely in reaction to previous oil price increases, U.S. oil consumption began to fall and production to rise. Consequently, U.S. net imports of oil fell from their peak of 8.5 MMBD in 1977 to 4.1-4.5 MMBD during the 1982-1985 period. Net imports were reduced from 46.4 percent of total consumption in 1977 to 26.5 percent of consumption in 1985.

Moreover, studies have shown that consumer and producer responses to higher oil prices would have been even greater were it not for U.S. price controls, which limited the prices of domestically produced crude oil and oil products until 1981, and the so-called Windfall Profit Tax of 1980 which continued to prevent U.S. oil producers from obtaining the full benefits of the world price.[1]

Outside the U.S., oil consumption fell substantially after 1979, while oil supplies were augmented by newly developed non-OPEC sources such as the North Sea, Mexico and Egypt. As a result of decreased oil import demand both in the U.S. and in the rest of the free world, demand for OPEC oil dropped by about 14 MMBD, or 45 percent, between 1979 and 1985. After Saudi Arabia increased its output in late 1985, the price of oil collapsed.

U.S. oil consumption and production at first responded sluggishly to the $10 per barrel price drop that occurred in January 1986. But as prices remained low, consumption increased more rapidly and production decreased more rapidly. By the fourth quarter of 1986, consumption had risen about 4 percent above the year-earlier level, while production had fallen about 7 percent below the year-earlier level (see Figure 2). By the end of the year, production was about 9 percent below its February peak. Consequently, net oil imports in 1986 rose substantially, reversing an 8-year downward trend in U.S. reliance on oil imports. For 1986 as a whole, net oil imports accounted for 32.5 percent of total oil consumption, up from 26.5 percent in 1985.

Lower oil prices also have affected oil consumption and production outside the U.S. Non-U.S. consumption was up about 2 percent in 1986, compared with an average annual decline of about one percent during the previous three years. On the supply side, although oil production in free world, non-OPEC nations outside the U.S. was up about one percent in 1986, this increase was far smaller than the 6 percent average annual gain in the previous three years.

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[1] See Joseph P. Kalt, The Economics and Politics of Oil Price Regulation in the Post-Embargo Era, Massachusetts Institute of Technology Press, 1981; and American Petroleum Institute, Domestic Petroleum Production and National Security, December 1986.

In summary, it is clear that the fall in oil prices is already causing free world oil consumption to rise and non-OPEC oil production to fall, thereby increasing the demand for OPEC oil. In addition, as discussed in the next section, the oil price fall has so weakened the U.S. petroleum industry that further declines in domestic production are likely.

The Effects of the Oil Price Fall on the Domestic Oil Industry

The fall in oil prices since 1981 has had a devastating impact on U.S. petroleum companies. The aggregate net income of leading U.S. oil companies fell by almost 50 percent between its 1981 peak and 1985. The earnings decline accelerated in 1986. Based on data for the first three quarters of the year (the latest data available), net income fell by about 20 percent in 1986. Moreover, the 1986 earnings decline for the leading oil companies, which are integrated concerns with refining, marketing, and transportation operations as well as oil production, was ameliorated by their downstream operations which generally did better than oil production. Independent producers fared even worse than the major integrated companies. An Oil & Gas Journal (October 27, 1986) survey of 170 independent producers indicated that they had an aggregate loss of about $3.5

billion in the first half of 1986, as compared with a profit of almost that size in the first half of 1985.

The fall in oil prices and consequent decline in profitability since 1981 caused a sharp reduction in petroleum exploration and development. Domestic exploration-production capital expenditures by the leading oil companies decreased by about 25 percent between 1981 and 1985. Such expenditures during the first three quarters of 1986 (the latest data available) fell about 40 percent from their level in the comparable period of 1985. And, expenditures in the third quarter of 1986 were down even more -- by 55 percent -- from their year-earlier level.

The number of rotary drilling rigs active in the U.S. fell from a high of about 4,500 in late 1981 to about 1,900 by year-end 1985. The rate of decline also accelerated in 1986, and the active rig count recently has only been about 900.

Consequently, the number of wells completed in the U.S. decreased after 1981, falling by about 19 percent by 1985. Estimates for 1986 indicate that well completions again fell, by more than 25,000, or nearly 40 percent. This is the largest annual decline on record.

Petroleum exploration and development in foreign countries also has declined, although the cutback in the U.S. has been far greater because the U.S. is a relatively high-cost producer. Foreign exploration-production capital expenditures by leading oil companies fell by about 14 percent from 1981 to 1985, and then by about 14 percent in 1986 alone (based on data for the first three quarters). Such expenditures in the third quarter of

1986 were down 25 percent from the third quarter of 1985. The number of drilling rigs active outside the U.S. declined only slightly between 1981 and 1985, but it fell by more than one-quarter during 1986. Thus, although oil field activity has been reduced most in the U.S., oil field activity outside the U.S. also is being cut to an increasing extent.

Companies providing oil field services and equipment have been especially hard-hit by the slump in exploration and development. The decline in their earnings, which began several years ago, accelerated in 1986. Salomon Brothers Inc., a leading investment firm, estimates operating losses for 12 major oil services companies at about $400 million in 1986, in addition to writeoffs and other extraordinary charges of about $1.7 billion. Salomon Brothers Inc. expects these companies to incur additional operating losses of about $400 million in 1987.

Oil industry employment in the U.S. has fallen by about 350,000 since 1981, with much of this decline occurring during half of the past year. Many skilled specialists -- such as geologists, geophysicists, and petroleum engineers -- have left the industry, and the number of students training for these positions is estimated to have fallen by as much as 80 percent during the past few years.

The exodus of resources from the domestic oil industry has been severe and may well continue. If so, the lack of necessary manpower and materials is likely to retard oil field activity, should the price of oil rise substantially. Even when necessary resources are readily available, there are long time lags between decisions to invest and the beginning of commercial production. An offshore project, for example, may take ten years from initial geophysical work to commercial production. If the industry lacks the necessary specialists or materials, these lead times could be even longer. So, there are likely to be substantial lags in the future response of U.S. oil production to rises in world oil prices.

Likely Trends in U.S. Petroleum Production, Consumption, and Imports

The American Petroleum Institute has reviewed a number of recent energy projections by government and private organizations in order to determine expected trends in U.S. oil consumption, production, and imports over the next ten years or so. Although the projections are based on different assumptions and techniques, they are in general agreement on basic trends: they expect U.S. oil production to decline, consumption to increase, and imports to rise substantially during the next decade. Appendix A provides detailed import projections.

Recent projections prepared by the National Petroleum Council (NPC) are representative of the outlooks reviewed. The NPC assumed two oil price paths. Its high-price case assumes that the inflation-adjusted price of oil will rise by 5 percent annually, starting at $18 per barrel in 1986. Its low-price case assumes that the real price of oil will rise by 4 percent annually, starting at $12 per barrel in 1986. In the high-price case, the NPC projects that U.S. crude oil production (excluding natural gas liquids) will fall from 8.9 MMBD in 1985 to 8.0 MMBD in 1990 and 7.0 MMBD in 1995. Petroleum products consumption is projected to rise from 15.7 MMBD in 1985 to 16.3 MMBD in 1990 and 17.0 MMBD in 1995. Oil imports are expected to rise from 4.3 MMBD in 1985 to 6.2 MMBD in 1990 and 7.9 MMBD in 1995. In the low-price case, the NPC projects larger declines in production and larger increases in consumption. In this scenario, oil imports are projected to rise to 8.4 MMBD in 1990 and 11.4 MMBD in 1995.

Most projections, including the NPC's, show U.S. consumption of non-oil fuels growing over the next 10-15 years. Coal consumption is expected to increase more rapidly than any other source of energy, including oil. Despite the expected growth in other fuels, however, analysts look for growth in domestic oil use.

Some projections reviewed indicate that the U.S. could be importing almost one-half of its oil requirement by as early as 1990 if oil prices in 1990 are still in the range of some $14 to $20 per barrel. Thus, by 1990 U.S. dependence on foreign oil could reach or exceed the peak level of dependence that existed in 1977 when net imports accounted for 46 percent of total oil consumption. If oil prices follow the trend assumed in the lowest price scenarios reviewed, the level of imports will skyrocket during the 1990s. The National Petroleum Council low-price case, for example, found that 1995 imports of 11.4 MMBD would account for 60 percent of total consumption.

The rise in imports in the U.S. and the rest of the world is expected to lead to a change in world petroleum market conditions. About three-quarters of the free world's oil reserves are held by OPEC countries. Further, Saudi Arabia and the other Persian Gulf nations alone hold 65 percent of the world's current surplus oil production capacity while OPEC as a whole holds 95 percent. This means that rising world consumption largely will be supplied by OPEC countries, strengthening OPEC's ability to establish and maintain production and pricing discipline among its members.

Economic Costs of Increased U.S. Reliance on Oil Imports

Importing oil rather than producing it domestically imposes two types of costs on the U.S. economy. First, higher U.S. oil imports increase world demand relative to supply and hence tend to raise the world price of oil. Secondly, higher U.S. oil imports relative to world production capacity increase the probability of a sudden spurt in world oil prices and intensify the effects should some physical event shock the world market (generally referred to as "disruption costs").

Effect of Higher U.S. Oil Imports on the World Oil Price

Although there are considerable differences of opinion about the future behavior of the OPEC cartel, from past experience the most likely scenario is that OPEC will increase oil prices when the world oil market tightens significantly.

Although estimates of OPEC's current and likely future capacity vary somewhat, it appears likely that worldwide demand for OPEC oil will raise OPEC's capacity utilization rate from its current level of 60 percent or so to over 80 percent within a few years. It will require only about a 6 MMBD increase in demand for OPEC oil to bring OPEC's capacity utilization to 80 percent, and most analysts foresee such an increase within a few years.

Figure 3 shows shows the historical relationship between OPEC capacity utilization and changes in world oil prices. Based upon this "reaction function," which was developed initially by the U.S. Department of Energy from analysis of OPEC's past behavior, and assuming a base oil price between $15 and $25 per barrel (in 1984 dollars), a one MMBD increase in the demand for OPEC oil is estimated to raise the world oil price by $1.04-$1.74 per barrel if OPEC capacity utilization is 80 percent, and by $5.35-$8.91 per barrel if OPEC capacity utilization is 90 percent.

ESTIMATED EFFECTS OF A ONE MMBD INCREASE IN U.S. DEMAND FOR OIL IMPORTS ASSUMING HISTORICAL OPEC REACTION

Initial OPEC Capacity Utilization Rate (percent)	Increase In World Oil Price* (1984 $/BBL)	Total Costs to U.S. of an Additional One Million Barrels/Day of Imports* (billions of 1984 dollars per year)
80%	$1.04 - $1.74	$ 8.5 - $14.2
90%	$5.35 - $8.91	$21.1 - $35.1

* Assumes a base price of between $15 and $25 per barrel and an increase in U.S. import demand from 7 MMBD to 8 MMBD. The lower price and cost estimates are for a base price of $15/BBL; the higher price and cost estimates are for a base price of $25/BBL.

Thus, a substantial increase in U.S. demand for imported oil is likely to increase the nation's oil import bill by much more than the cost of the additional barrels imported. If, for example, the U.S. oil import demand were to increase from 7 to 8 MMBD and this were to cause prices to rise from $15 to $20 per barrel, the daily U.S. oil import bill would rise by $55 million ($20/BBL times 8 MMBD less $15/BBL times 7 MMBD) and the annual bill by $20 billion.

Disruption Costs

Concentration of oil supplies in a politically unstable area like the Middle East increases the risks of a supply disruption. The U.S. can mitigate the impact of an unfavorable Middle Eastern development on the world oil price, however, by reducing its demand for imported oil, thereby creating greater slack in world oil markets.

A disruption has the direct effect of transferring wealth from oil-importing to oil-exporting nations. In the current context, a cutback in foreign oil production that caused the oil price to rise by $10 per barrel would transfer from the U.S. some $20 billion per year, or about one-half of one percent of the U.S. gross national product (GNP).

In addition to the wealth transfer effects of an oil supply disruption, researchers have estimated substantial indirect costs. Econometric estimates of the overall macroeconomic effects of supply disruptions have been much larger than the direct wealth transfer effects. For example, simulations utilizing the macroeconomic models of Data Resources Inc., Wharton Econometric Forecasting Associates, and Lawrence H. Meyer Associates performed for the National Petroleum Council indicate that the 1973-1974 oil price jump reduced the U.S. GNP by about

2.5 percent within three years, while the 1979 price jump reduced U.S. GNP by about 3.5 percent within three years. And, current estimates indicate that a large world oil supply shortfall of say 10 MMBD could reduce the U.S. GNP by as much as 7 percent.

As the U.S. becomes more dependent on imported oil, the potential costs of a supply disruption will rise. Therefore, to the extent that low oil prices today increase U.S. import dependence, they create the potential for higher disruption costs.

National Security Implications of Increased U.S. Oil Import Dependence

Besides the economic costs of increased reliance on OPEC oil, such reliance can impose military and foreign policy burdens on the U.S. and other oil-importing nations. In brief, because of dependence on oil imports from the Middle East, the U.S. and other oil importers may have to make military commitments and adopt foreign policies that they might not otherwise choose.

In addition, higher world oil prices benefit the Soviet Union, which is the world's largest oil and natural gas producer and holds enormous proved oil and gas reserves. Soviet oil reserves are estimated at 61 billion barrels, representing about 10 percent of world reserves and placing it behind only Saudi Arabia and Kuwait. Soviet natural gas reserves are estimated at 1,500 trillion cubic feet, representing 43 percent of the world's reserves.

In 1985, the Soviet Union exported 1.1 MMBD of oil to the West. Soviet policy is geared to increasing such exports, although it is uncertain whether the Soviets will be able to do so over the long-run. In addition, Soviet natural gas exports are about 0.6 MMBD oil equivalent. The United Nations Economic Commission estimates that natural gas exports will grow to one MMBD oil equivalent by 1990. A $10 increase in the world price of oil thus would increase Soviet hard currency earnings by over $4 billion per year at present and possibly by much more in the future.

For a more detailed discussion of the economic and national security implications of increased U.S. reliance on oil imports, see the American Petroleum Institute's Domestic Petroleum Production and National Security, published in December 1986.

Federal Energy Policy

In assessing federal policies which potentially could improve U.S. energy security, it is important first to recognize and avoid policies that are counterproductive. Unfortunately, this has not been the case in the recent past.

For example, last year's tax reform act will have, depending on price and income assumptions, an estimated $13 billion negative impact on the oil industry over the next five years. This represents a new burden on an industry already reeling from the oil price collapse. The new tax law further discriminates against the petroleum industry, whose major companies had an effective federal tax rate almost twice as high as non-petroleum companies -- 41 percent versus 23 percent -- during the 1980-1985 period.

Along the same lines, the Superfund law enacted last year targets the petroleum industry to pay almost one-half of the $9 billion cost over five years. This clearly is a disproportionate share of the total, since oil companies account for a very small share of the volume of wastes deposited directly at dumps that have become Superfund sites.

In addition to the above costs, the petroleum industry faces huge environmental protection costs to meet lead phasedown and underground tank cleanup requirements, and it may soon face new environmental protection costs relating to Clean Water Act regulations in the Gulf of Mexico, refinery wastes disposal, Stage II vapor control requirements for service stations, Reid vapor pressure reductions, changes in tank truck requirements, acid rain controls, and disposal of exploration-production wastes. If all these were to come to fruition and including the tax reform's burden, the total additional cost to the industry over the next five years could approach $100 billion. Such burdens imposed together make it extremely difficult for the industry to hold domestic petroleum production near present levels.

What can the government do that would positively affect U.S. energy security? A good start would be the abolition of the so-called Windfall Profit Tax. At present, the tax is not imposed on current production due to the drop in oil prices. Indeed, the tax would not begin to raise revenues until the price of oil rose above about $20 per barrel, and significant revenues would not be raised until the price reached about $25. Yet, the tax remains, and its continued existence not only discourages investment in domestic petroleum development but also necessitates the expenditures of millions of dollars by oil companies just to fill out tax forms indicating that no revenues are owed the government. In the event prices were to rise to $25 per barrel before the tax expires in 1993, the Windfall Profit Tax -- which in reality is an excise tax -- would dampen exploratory and development activity that otherwise might be expected in response to higher prices and thereby contribute to even higher oil prices. Removing the Windfall Profit Tax would be in everyone's interest.

Various non-tax impediments to oil and gas development also should be eased. Perhaps nowhere is this clearer than with respect to the government's leasing policies. In Alaska, for example, the 1.6 million acres of the coastal plain within the northern edge of the Arctic National Wildlife Refuge (ANWR) and extending westward from the Canadian border lie between two major petroleum discovery areas. Yet, by law, oil and gas leasing on the coastal plain portion of ANWR is prohibited. In 1980, the U.S. Geologic Survey (USGS) estimated that ANWR could contain as much as 17 billion barrels of oil and 34 trillion cubic feet of natural gas, and that virtually all of that potential lies in its coastal plain. The importance of further exploratory activity in Alaska is all the more apparent when it is realized that production from Prudhoe Bay reserves is expected to peak in 1990 and decline thereafter.

In offshore California a moratorium on leasing has existed since 1981. This moratorium affects acreage with some of the highest potential for near-term development. The U.S. Interior Department estimated that potential reserves in offshore California range between 2-10 billion barrels oil equivalent. Actions by the Congress to place much of offshore California off limits through moratoria have prevented the industry from even conducting tests which would provide a better evaluation of potential reserves. The industry believes that better access to promising areas in Alaska and offshore California would contribute significantly to U.S. energy security.

Continued fill of a government owned Strategic Petroleum Reserve consisting of crude oil in another step that can benefit the nation. Such a reserve can provide a measure of protection in the event of a short-term supply interruption.

Complete decontrol of natural gas prices also would be a productive policy initiative. Some 40 percent of U.S. gas production remains subject to wellhead price controls. A number of studies have concluded that continued controls inhibit the development of additional reserves and delivery capability. For example, the U.S. Department of Energy's Energy Information Administration has estimated that an additional 28 trillion cubic feet of gas supplies ultimately would be developed if remaining controls on natural gas prices were removed. The Office of Technology Assessment estimated the supply response would range between 19-38 trillion cubic feet.

Much of the continued support for controls probably can be attributed to the belief that controls on gas prices have held prices down and that decontrol would result in a price fly-up.

The historical experience associated with the decontrol of crude oil prices in 1981 and the partial decontrol of gas prices in 1985 does not support this view. Further, recent analyses of the natural gas market by the American Petroleum Institute casts substantial doubt that decontrol of gas prices would trigger a price fly-up.

A final policy change supported throughout the industry is repeal of the Fuel Use Act which constrains the use of natural gas by electric utilities and some large industrial users. Given the potential for the development of gas reserves, it makes little sense arbitrarily to restrict the use of gas. The natural gas shortages of the 1970s that motivated the Fuel Use Act were the product of comprehensive federal wellhead price controls. Partial decontrol of natural gas prices did a lot to make usage more efficient and spur development of gas reserves and, as a consequence, eliminated the shortages. As noted above, complete decontrol would insure complete realization of our natural gas potential. In such an environment, it makes little sense to restrict gas use.

Some proposals to eliminate the Fuel Use Act have included provisions that would require utilities which desire to use natural gas to construct plants capable of burning coal as well. In our view, that decision is best left to utilities. Utilities should not be forced to make large investments they deem uneconomical.

Some believe that with the removal of government imposed impediments to petroleum development, private markets are sufficiently responsive so that no further actions are required. Others disagree, in part because they do not trust the government to continue to support free markets if future supply-demand balances result in much higher petroleum prices.

An oil import fee is one policy that might be used to reduce import dependence. Because an import fee would have far-reaching consequences with diverse impacts on regions, industries and individuals, opinions on its desirability vary, and it requires careful study.

Alternative measures, such as tax incentives for oil and gas investment, also are complicated issues. Concerning such types of measures, a fair summary is that the petroleum industry expects government to consider the advantages and disadvantages of each and not to rule out any such measure at this time.

The measures advocated herein will not reverse the trends for the U.S. noted earlier, but they will slow them and ameliorate economic damage if another energy shock occurs. A deferral of energy vulnerability is worth pursuing; the more sensible our policies, the more time we can buy and the greater the saving. As discussed above, even a one million barrel per day reduction in the demand for imported oil, which is small relative to our present and likely future oil consumption, can provide quite substantial savings.

1/29/87

FIGURE 1

World Oil Price

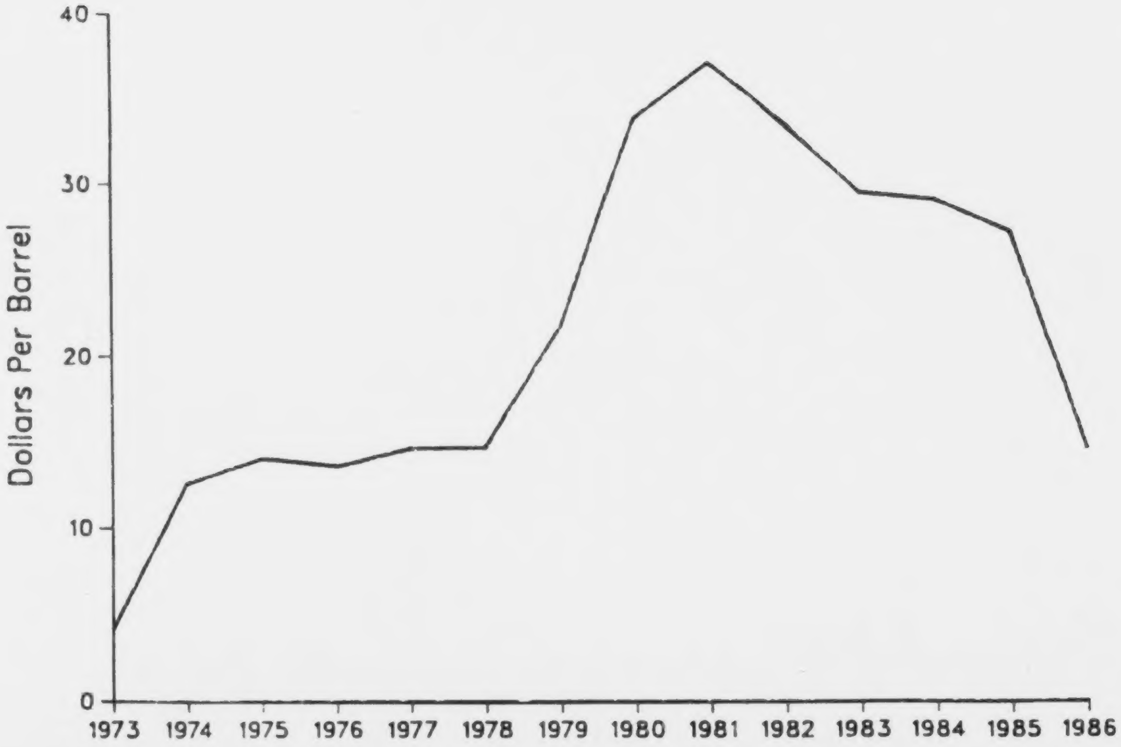


FIGURE 2

Reactions in U.S. Oil Markets To 1986 Oil Price Drop

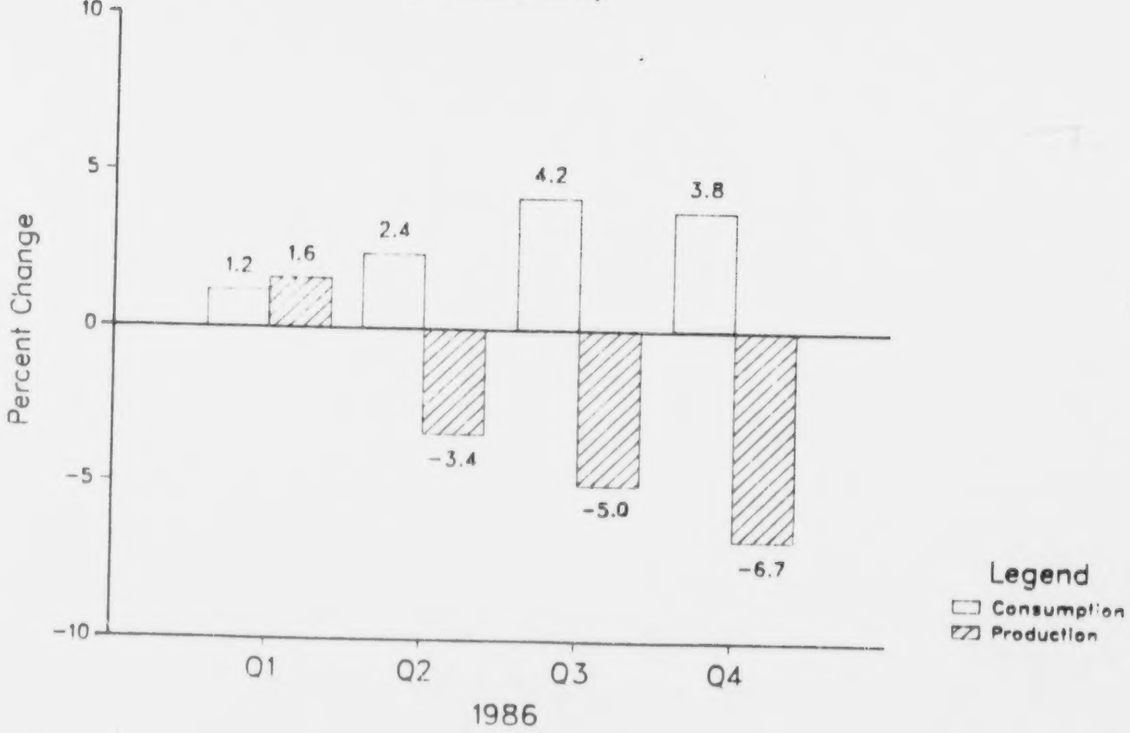
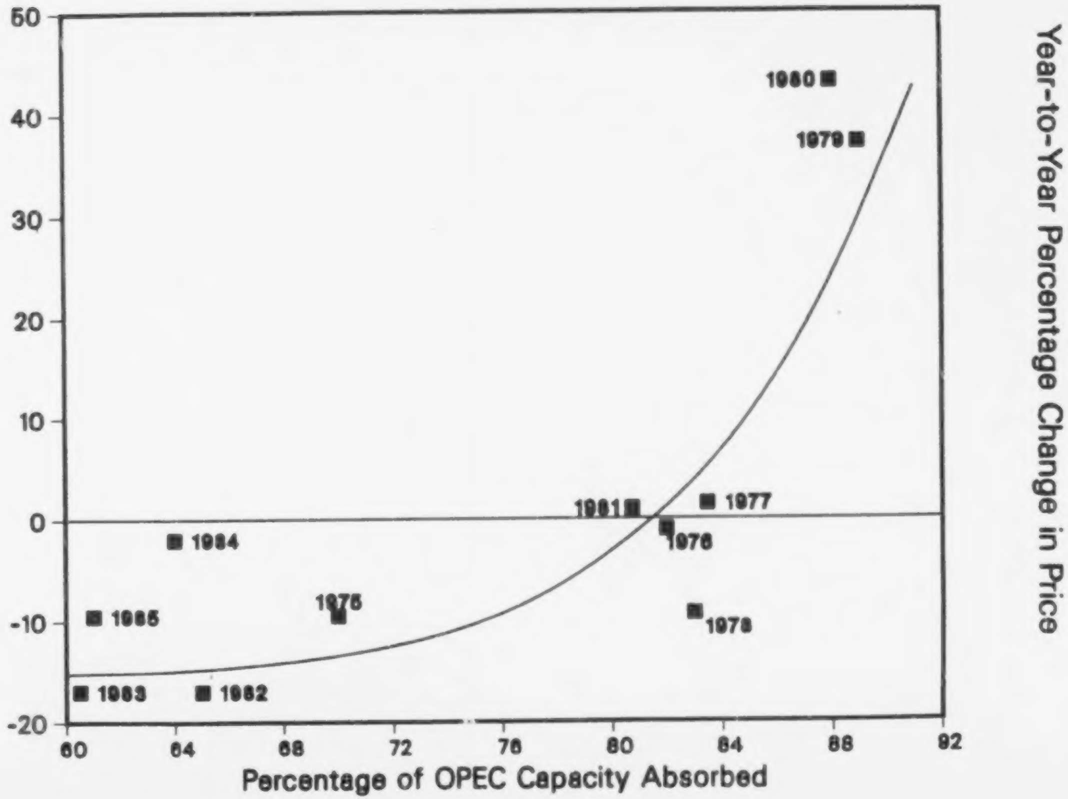


FIGURE 3

OPEC Capacity/Oil Price Relationship



Appendix A

Projections of U.S. Oil Imports*
(MMBD)

	1985(A)	1986	1990	1995	2000
Chase Econometrics					
Low Price Scenario					
Net Imports	4.3	6.0	11.3	--	18.8
Percent of Consumption	27	37	62	--	83
High Price Scenario					
Net Imports	4.3	5.9	8.4	--	16.1
Percent of Consumption	27	36	48	--	75
Chevron					
High Price Scenario					
Net Imports	4.3	--	6.2	7.9	9.0
Percent of Consumption	27	--	38	47	53
Conoco					
Base Case					
Net Imports	4.3	--	5.5	7.5	10.2
Percent of Consumption	27	--	34	43	56
DOE/EIA					
Annual Energy Outlook Base Case					
Net Imports	4.3	--	5.8	7.8	--
Percent of Consumption	27	--	36	47	--
AEO Low Price Case					
Net Imports	4.3	--	7.4	11.1	--
Percent of Consumption	27	--	43	60	--
National Petroleum Council					
Upper Price Trend					
Net Imports	4.3	--	6.2	7.9	9.1
Percent of Consumption	27	--	38	47	52
Lower Price Trend					
Net Imports	4.3	--	8.4	11.4	13.6
Percent of Consumption	27	--	48	60	68

Note: (A) = Actual

*Sources: Chase Econometrics, Inc., The Next Oil Shock: A Planning Guide for World Energy Markets, 1986-2000, 1986; Chevron Corporation, World Energy Outlook, June 1986; Conoco, Inc., World Energy Outlook Through 2000, September 1986; U.S. Department of Energy/Energy Information Administration, The Impact of Lower World Oil Prices and Alternative Tax Proposals on the U.S. Economy, April 1986; and National Petroleum Council, U.S. Oil and Gas Outlook: An Interim Report of the National Petroleum Council, October 1986. See these sources for detailed discussions of underlying assumptions.

STATEMENT OF MR. GEORGE SINGER, TULSA, OK, CHAIRMAN, TAXATION COMMITTEE, INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

Mr. SINGER. Thank you, Mr. Chairman. I appreciate your giving me the opportunity to appear today.

On behalf of all independent producers, I also express appreciation for the effort you and others on this committee are making to address a serious national problem.

My name is George Singer. I am General Partner of Singer Brothers, which maintains offices in Tulsa, Oklahoma, where I live, and also in Oklahoma City. My family has been engaged in various aspects of the oil and gas industry for approximately 60 years, supplying new and used oil field equipment, the operation of producing properties, contract drilling, exploration and production, and the royalty business. I am currently Chairman of the Tax Committee of the Independent Petroleum Association of America, and I believe I am in a position to speak on current matters of concern to oil and gas producers.

I do not come here today to propose legislative action to bail out domestic oil and gas producers. Even though many of my colleagues in the industry are in dire financial straits, that is not the issue. The U.S. is in danger of becoming irreversibly dependent upon Arab OPEC producers for a majority of its petroleum needs. When that happens, we become subject to economic and political blackmail to an unprecedented degree.

While there are many tax issues that need to be addressed, I will confine my remarks to two items, each of which I view as a matter of common sense and fairness.

I will add, Senator Boren, that there is a written statement that amplifies my remarks and contains many other matters and statistics.

Senator BOREN. It will be included in the record in full.

Mr. SINGER. The first item that I will address is the so-called "windfall profit tax." The entire petroleum industry applauds your efforts to repeal this onerous, illogical, misnamed excise tax. It should be abundantly clear by now that this measure taxes not profits but is directed against revenue. It is a tax that is assessed at the wellhead, irrespective of whether or not the taxpayer is operating at a profit or a loss. It not only is mistitled but it is a true administrative nightmare for all concerned—operators, purchasers, producers, and royalty owners are surely unanimous at this point in time in their feeling that nothing productive comes from maintaining this tax. Little revenue is produced, and the expense in dollars and hundreds of thousands of man hours is wasted.

My company employs 17 people. Of that number, two are engaged in what I would characterize as creative productive work. All the rest spend virtually all of their time doing compliance work. Due to the nature of our holdings—we have very many small mineral and royalty interests—we receive revenue from approximately 2,000 wells. We also receive an IRS form, 6248, in connection with each interest owned by us. This form, along with backup documents, details the windfall profit tax activity for that property. These forms fill up an entire room in our office.

Some might argue that the lack of revenue realized by this measure is only temporary; with that I would disagree. Although oil prices have rebounded somewhat in recent weeks, most production is still selling for less than the windfall tax base prices. Even if prices were to continue to climb somewhat, very little revenue could be expected.

A more likely scenario than continued price increases is a leveling off of oil prices followed by a downturn, as the winter season here and in Europe passes. Any minimum revenue realized is dwarfed by the cost of collecting and accounting for it.

I strongly encourage you to adopt legislation which will give it a quick death. Repeal is not only justified, it makes overwhelming sense.

The second issue which I would like to discuss is the alternative minimum tax as it applies to oil and gas producers.

The Tax Reform Act of 1986, while not achieving all of the goals identified by individuals and groups supporting tax reform, at least purported to begin leveling the playing field. Many tax preferences were eliminated, and a number of provisions were modified so they applied equally to all taxpayers. This was supposed to be true of the alternative minimum tax, or AMT.

Unfortunately, the true result is that oil and gas producers are discouraged from aggressively operating their businesses and to increase production and find badly needed new reserves. In many instances, they are even penalized for doing so.

The reasons for this are twofold: First, in addition to the preferences to which all taxpayers are subjected, items peculiar to oil and gas exploration are brought back in as preferences for calculation of the AMT.

Second, the gap between the top marginal tax rate for collecting regular tax and the AMT rate has been dramatically narrowed. The result of this narrowing is such that, if a taxpayer's preferences exceed one-third of his taxable income as calculated under the regular tax tables, he will pay under the AMT provisions. Almost every active oil gas producer will be affected by this.

This result may not be unintended, but is it fair and is it good policy? I emphatically say No, as it applies to oil and gas producers. While it may be desirable to discourage taxpayers from relying on preferences to reduce their tax obligations, a distinction can be made between those preferences which are simply tax avoidance or tax-deferral techniques and those which, notwithstanding being classified as preferences, represent legitimate and necessary expenses in an ongoing enterprise.

Every barrel of oil or cubic foot of gas produced represents the liquidation of assets by the individual or entity owning it. An oil and gas producer must continue to explore for and successfully add reserves, unless he wishes to liquidate his business. Despite this cold, hard reality of the oil business, many producers will choose to liquidate rather than face punitive tax treatment. Let me explain:

Two items which are crucial to producers, particularly independents, are statutory depletion and the current expensing of intangible drilling costs. The historical and economic basis for each of these items is certainly appreciated by you, and I will not belabor them at this time.

Despite the legitimacy of the current treatment of these items for calculating regular tax obligations, each is treated as a preference. The effect of this is to throw many producers into the AMT. This happens because of the way the items are defined, and new limitations which are imposed by the Tax Reform Act of 1986.

Previously, excess IDC was considered a preference only to the extent it exceeded net oil and gas income. Now, only 65 percent of net oil and gas income can be offset. For a producer who is just beginning to be active in the business or dramatically increasing his level of activity, this means that beyond a point he will spend a dollar and increase his preference by a dollar. Thus, despite the fact that the producer is spending hard dollars on legitimate business activity, and reducing the cash which he has on hand for any other use, he will continue to pay exactly as much tax as if he had not spent that dollar. In fact, he can reach a point where he can spend a dollar and increase his tax liability at the same time.

Similar results will occur for many taxpayers who have been active in the industry for a long time. These taxpayers will have substantial amounts of statutory depletion as the result of income on existing production. While this depletion generates justifiable deductions in view of the physical depletion of the asset, it is treated as a preference. Because the rate differential has narrowed, as I mentioned earlier, the taxpayer may, through depletion alone, have sufficient preferences to throw him into the AMT. Each dollar spent on intangible drilling costs will then reduce the taxpayer's actual income by a like amount, but it will not reduce the amount of tax owed. And again, the taxpayer can reach a point where the expenditure of a dollar on intangible drilling costs also costs him 21 cents in additional tax.

Do we really want to prevent independent oil and gas producers from risking their money in future exploration? It is one thing to say we will not subsidize or provide incentives for this activity; it is quite another to penalize those willing to undertake it.

Fortunately, there is a relatively simple solution to this problem. I urge the members of this committee to remove these two items as preferences for purposes of calculating Alternative Minimum Tax. At the very least, the net income offset for IDC should be restored to 100 percent.

If the tax treatment of these items is justified for calculating regular tax, as I believe it is, there is no logical basis for calling them "preferences" at the other end. Rules that seem to be evenhanded cannot be justified when they choke off the very lifeline of an industry.

Our full statement for the record contains a comprehensive list of needed tax changes. No single change will have a dramatic effect, but adopted together as a package they would do much to bring back domestic exploration and production.

Thank you for your time.

Senator BOREN. I appreciate your statement very much. It is alarming to view the impact that these changes could have, especially when you consider the vast percentages that have been plowed back in the past into additional activity by the independent sector. We have always used the thumbnail figure of 110 percent of current cash flow that has in essence been plowed back, and I think that the implications of the way the minimum tax was structured certainly creates very, very severe problems. Some of us tried to bring those to the attention of our colleagues at the time the bill was passed, with varying degrees of success. But I think it is very important that we reassert those problems, and you have done that very well today.

Mr. Durand, we are very happy to have you with us, and we will be glad to receive your testimony at this time.

[Mr. Singer's written prepared testimony follows:]

George Singer

Mr. Chairman,

I appreciate your giving me the opportunity to appear today. On behalf of all independent producers I express appreciation for the effort you and others on this committee are making to address a serious national problem. My name is George Singer. I am general partner of Singer Bros., which maintains offices in Tulsa, Oklahoma, where I live and also in Oklahoma City. My family has been engaged in various aspects of the oil and gas industry for approximately 65 years, supplying new and used oil field equipment, operation of producing properties, contract drilling, exploration and production and the royalty business. I am currently chairman of the Tax Committee of the Independent Petroleum Association of America. I believe I am in a position to speak on current matters of concern to oil and gas producers.

I do not come here today to propose legislative action to bail out domestic oil and gas producers. Even though many of my colleagues in the industry are in dire financial straits, that is not the issue. The U.S. is in danger of becoming irreversibly dependent on Arab OPEC producers for a majority of its petroleum needs. When that happens, we become subject to economic and political blackmail to an unprecedented degree. While there are many tax issues needed to be addressed, I will confine my remarks to two items, each of which I view as a matter of common sense and fairness.

The first of these is the so-called Windfall Profit Tax. The entire petroleum industry applauds your efforts to repeal this onerous, illogical, misnamed excise tax. As should be abundantly clear by now, this measures taxes not profits, but is directed against revenue. It is a tax that is assessed at the wellhead irrespective of whether or not the taxpayer is operating at a profit or a net loss. It not only is mis-titled, but it is a true administrative nightmare for all concerned. Operators, purchasers, producers and royalty owners are surely unanimous at this point in time in their feeling that nothing productive comes from maintaining this tax. Little revenue is produced and the expense in dollars and hundreds of thousands of man-hours is wasted. My company employs 17 people. Of that number, two are actively engaged in what I would characterize as creative, productive work. All the rest spend virtually all of their time doing compliance work. Due to the nature of our holdings -- we have many very small mineral and royalty interests -- we receive revenue from approximately 2,000 wells. We also receive a form -- 6248 -- in connection with each interest owned by us. This form, along with back-up documents, details the Windfall Profit Tax activity for that property.

Some might argue that the lack of revenue realized by this measure is only temporary. I disagree. Although oil prices have rebounded somewhat in recent weeks, most production is still selling for less than the base prices. Even if prices were to continue to climb somewhat very little revenue could be expected. A more likely scenario than continued price increases is a levelling off of oil prices followed by a downturn as the winter season here and in Europe passes.

Any minimum revenue realized is dwarfed by the cost of collecting and accounting for it. I strongly encourage you to adopt the legislation which will give it a quick death. Repeal is not only justified, it makes overwhelmingly good sense.

The second issue which I would like to discuss is the alternative minimum tax as it applies to oil and gas producers. The Tax Reform Act of 1986, while not achieving all of the goals identified by individuals and groups supporting tax reform, at least purported to begin levelling the playing field. Many tax preferences were eliminated and a number of provisions were modified so that they applied equally to all taxpayers. This was supposed to be true of the alternative minimum tax (or AMT). Unfortunately, the true result is that active oil and gas producers are discouraged from aggressively operating their businesses to increase production and find badly needed new reserves. In many instances, they are penalized for doing so. The reasons for this are twofold. First, in addition to the preferences to which all taxpayers are subjected, items peculiar to oil and gas exploration are brought back in as preferences for calculation of the AMT. Second, the gap between the top marginal tax rate for calculating regular tax, and the AMT rate, has been dramatically narrowed. The result of this narrowing is such that if a taxpayer's preferences exceed 1/3 of his taxable income as calculated under the regular tax, he will pay under the AMT provisions. Almost every active oil and gas explorer/producer will be affected by this.

This result may not be unintended, but is it fair and is it good policy? I emphatically say no as this applies to oil and gas producers. While it may be desirable to discourage taxpayers from relying on preferences to reduce their tax obligations, a distinction can be made between those preferences which are simply tax-avoidance or tax-deferral techniques and those which, notwithstanding being classified as preferences, represent legitimate and necessary expenses in an ongoing enterprise. Every barrel of oil or cubic foot of gas produced represents a liquidation of assets by the individual or entity owning it. An oil and gas producer must continue to explore for and successfully add reserves unless he wishes to liquidate his business.

Despite this cold hard reality of the oil business many producers will choose to liquidate rather than face punitive tax treatment. Let me explain. Two items which are crucial to producers, particularly independents, are statutory depletion and the current expensing of intangible drilling costs. The historical and economic basis for each of these items is certainly appreciated by you and I'll not belabor it at this time. Despite the legitimacy of the current treatment of these items for calculating regular tax obligations, each is treated as a preference. The effect of this is to throw many producers into the AMT. This happens because of the way the items are defined and new limitations are imposed by the Tax Reform Act of 1986. Previously, excess IDC was considered a preference only to the extent it exceded net oil and gas income; now, only 65% of net oil and gas income can be offset. For a producer who is just beginning to be active in the business or dramatically increasing his level of activity this means that beyond a point he will spend a dollar and increase his preference by a dollar. Thus, despite the fact that the producer is spending hard dollars on legitimate business activities (and reducing the cash which he has on hand for any other use), he can reach a point where he can spend a dollar and increase his tax liability. Similar results will occur for many taxpayers who have been active in the industry for a long time. These taxpayers will have substantial amounts of statutory depletion as a result of income on existing production. While this depletion generates justifiable deductions in view of the physical depletion of the asset, it is treated as a preference. Because the rate differential has narrowed as I mentioned earlier the taxpayer may, through depletion alone, have sufficient preferences to throw him into the AMT. Each dollar spent on intangible drilling costs will reduce the taxpayer's actual income by a like amount, but it will not reduce the amount of tax owed. And again, the taxpayer may reach a point where the expenditure of a dollar on intangible drilling costs also costs him twenty-one cents in additional tax. Do we really want to prevent independent oil and gas producers from risking their money in further exploration? It is one thing to say we will not subsidize or provide incentives for this activity; it is quite another to penalize those willing to undertake the risks of it.

Fortunately, there is a relatively simple solution to this problem. I urge the members of this committee to remove these two items as preferences for purposes of calculating AMT. At the very least, the net income offset for IDC should be restored to 100%. If the tax treatment of these items is justified for calculating regular tax (as I believe it is) there is no logical basis for calling them preferences at the other end. Rules which seem to be even-handed cannot be justified when they choke off the very life-blood of an industry. Our full statement for the record contains a comprehensive list of needed tax changes. No single change will have a dramatic change, but adopted together as a package they would do much to bring back domestic exploration and production.

Thank you for your time.

STATEMENT OF MR. FRANCIS DURAND, CHAIRMAN, TAXATION COMMITTEE, TEXAS INDEPENDENT PRODUCERS AND ROYALTY OWNERS, AUSTIN, TX

Mr. DURAND. Thank you, Mr. Chairman. I also have prepared a statement for the record.

Senator BOREN. It will be received in full.

Mr. DURAND. I am a consultant for the firm of Ernst and Whinney, and I appear today as Vice Chairman on Federal Taxation for the National Energy Policy Committee of TIPRO. TIPRO is composed of 4,500 independent producers and royalty owners who have an interest in Texas petroleum production.

On behalf of TIPRO, I express appreciation for this opportunity to appear today on a matter of extreme importance to the domestic petroleum industry. I would like to commend the Chairman for his leadership in making the country aware of the serious nature of our energy situation and its ramifications relating to national security objectives. As part of this effort, TIPRO particularly welcomes his strong support for the oil import fee concept.

Our association initiated its support for a variable oil import fee in August of 1985. We remain convinced that action of this nature is necessary to secure adequate levels of domestic exploration and development of oil and gas reserves in the future. This is not to say, however, that all other actions designed to lower taxation costs or bolster energy prices should be dismissed as solutions to the problem. On the contrary, TIPRO welcomes the possibility of any substantial remedial action aimed at reversing industry doldrums now confronting us.

Senator Johnston quoted some figures with respect to the State of Louisiana, and I would like to quote a very few additional figures with respect to the State of Texas.

In Texas, which is the nation's leading petroleum producer, the results are serious. In the past year, unemployment has averaged almost nine percent. Over 55,000 oil and gas related jobs, some 23 percent of the total, have disappeared. Once again, as Senator Johnston said, these would include positions held by geologists, engineers, and other hard-to-replace professionals that will not be around when drilling hopefully resumes.

Drilling applications fell by 16,500 during 1986, almost 50 percent. The rotary rig count fell 55 percent, from 680 to 308. It is estimated by state Railroad Commission data that the state lost 49 million barrels, or 214,000 barrels per day, in 1986.

All of these facts show that we are having a very bad problem in the State of Texas with respect to oil and gas exploration and development.

Speaking to the matter which was raised by several of the former witnesses about the peril point level, TIPRO has conducted a study. This study indicates, by using trend lines, that the 50-percent level will be reached by late June of 1988, approximately 17 months from now.

We understand that Finance Committee Chairman Lloyd Bentsen will actively seek passage of his bill, calling for remedial actions by the Administration in the event the ratio between imports and domestic demand exceeds 50 percent. We believe that the bill's concept might be bolstered by listing specific requirements for the Administration to follow when the peril point is reached. Many of these requirements may be developed by these hearings today.

Senator Boren. Mr. Durand, before you go to the next page, you said we would hit the 50 percent at what time?

Mr. Durand. Late June 1988.

Senator Boren. June of 1988?

Mr. Durand. That is based upon the trend line.

Senator Boren. And that was done by the National Petroleum Council?

Mr. Durand. TIPRO.

Senator Boren. It wasn't the National Petroleum Council?

Mr. Durand. No, it was not, I believe.

Specifically, we wholeheartedly endorse Senate Bill 255, calling for repeal of windfall profits tax, and the following provisions incorporated in the Chairman's bill, Senate Bill 233: An increase in the percentage depletion rates which is related to the annual removal price of oil and gas. In connection with this provision, we recommend that section 3(A) of the bill be broadened to provide for the conversion of natural gas prices per MCF or MMBTU to the removal price stated in the bill.

The elimination of the 50 percent net income limitation,

Repealing the rule denying percentage depletion deduction subsequent to a transfer of proven properties,

Extending the exemption from windfall profit taxes provided for stripper well oil to production from transferred proven properties,

Extend the definition of IDCs on oil and gas wells, which are subject to the election to deduct same, to include G&G costs and surface casing costs,

And eliminate the recapture rule applicable to the gain from disposition.

We feel all of these particular specific provisions relate to the continuation of production from marginal properties or to increased production from additional properties.

We also would recommend very strongly consideration of a tax credit of approximately 15 percent, as an example, applicable to costs incurred in connection with exploration activities.

In conclusion, Mr. Chairman, TIPRO hopes that these remedial changes in the Tax Code can be pressed for immediately in the congressional process. Our association would also welcome their specific inclusion in the 50 percent peril point bill, Senate Bill 2678, as definite guidelines for the Administration to follow in coping with the peril point emergency.

TIPRO also recommends that the Administration be required to act within 30 days following an occurrence of the peril point ratio, in that the computation of the ceiling level called for in Section 3(B) of the bill be based on consumption for a 90-day period in lieu of an annual period. It is our belief that the nation must move quickly to correct inadequate domestic coverage of its energy needs.

Thank you.

Senator Boren. Mr. Durand, thank you very much for your comments.

Our next panelist is Mr. Wallace, Chairman of the Texas Railroad Commission.

[Mr. Durand's written prepared testimony follows:]

TESTIMONY

ON REMEDIAL TAX RELIEF PROPOSALS FOR THE DOMESTIC PETROLEUM PRODUCING INDUSTRY

Before The

SUBCOMMITTEE ON ENERGY AND AGRICULTURAL TAXATION

U. S. SENATE FINANCE COMMITTEE

Presented By

Francis L. Durand, Vice-Chairman on Federal Taxation

Texas Independent Producers and Royalty Owners Association
Austin, Texas

Washington, D. C.

January 30, 1987

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

MY NAME IS FRANCIS L. DURAND, AND I AM A CONSULTANT FOR THE FIRM OF ERNST AND WHINNEY, LOCATED IN ITS OFFICES IN SAN ANTONIO, TEXAS. I APPEAR HERE TODAY AS VICE CHAIRMAN ON FEDERAL TAXATION OF THE NATIONAL ENERGY POLICY COMMITTEE OF THE TEXAS INDEPENDENT PRODUCERS AND ROYALTY OWNERS ASSOCIATION OR "TIPRO." TIPRO IS COMPOSED OF 4,500 INDEPENDENT PRODUCERS AND ROYALTY OWNERS WHO HAVE AN INTEREST IN TEXAS PETROLEUM PRODUCTION.

ON BEHALF OF TIPRO, I EXPRESS APPRECIATION FOR THIS OPPORTUNITY TO APPEAR ON A MATTER OF EXTREME IMPORTANCE TO THE DOMESTIC PETROLEUM PRODUCING INDUSTRY. I ALSO COMMEND THE CHAIRMAN FOR HIS LEADERSHIP IN MAKING THE COUNTRY AWARE OF THE SERIOUS NATURE OF OUR ENERGY SITUATION AND ITS RAMIFICATIONS RELATING TO NATIONAL SECURITY OBJECTIVES. AS PART OF THIS EFFORT, TIPRO PARTICULARLY WELCOMES HIS STRONG SUPPORT FOR THE OIL IMPORT FEE CONCEPT.

OUR ASSOCIATION INITIATED ITS SUPPORT FOR A VARIABLE OIL IMPORT FEE IN AUGUST, 1985, AND REMAINS CONVINCED THAT ACTION OF THIS NATURE IS NECESSARY TO SECURE ADEQUATE LEVELS OF DOMESTIC EXPLORATION AND DEVELOPMENT OF OIL AND GAS RESERVES IN THE FUTURE. THIS IS NOT TO SAY, HOWEVER, THAT OTHER ACTIONS DESIGNED TO LOWER TAXATION COSTS OR BOLSTER ENERGY PRICES SHOULD BE DISMISSED AS SOLUTIONS TO THE PROBLEM. ON THE CONTRARY, TIPRO WELCOMES THE POSSIBILITY OF ANY SUBSTANTIAL REMEDIAL ACTION AIMED AT REVERSING INDUSTRY DOLDRUMS NOW CONFRONTING US.

THE DRAMATIC AND SUDDEN DROP IN PRICES FOR BOTH OIL AND GAS THAT OCCURED APPROXIMATELY ONE YEAR AGO HAS SUBSTANTIALLY DAMAGED THE DOMESTIC INDUSTRY'S ABILITY TO MAINTAIN ENERGY PRODUCTION LEVELS OF RECENT YEARS. IN TEXAS, THE NATION'S LEADING PETROLEUM PRODUCER, THE RESULTS ARE SERIOUS. IN THE PAST YEAR, UNEMPLOYMENT HAS AVERAGED ALMOST NINE PERCENT, AND OVER 55,000 OIL AND GAS RELATED JOBS, SOME 23 PERCENT OF THE TOTAL, HAVE DISAPPEARED. THESE INCLUDE POSITIONS HELD BY MANY GEOLOGISTS, ENGINEERS AND OTHER HARD TO REPLACE PROFESSIONALS THAT WILL NOT BE AROUND WHEN DRILLING HOPEFULLY RESUMES.

DRILLING ACTIVITY IN THE LONE STAR STATE NOSEDIVED, AS DRILLING APPLICATIONS FELL BY 16,500 DURING 1986, OR ALMOST 50 PERCENT. THE ROTARY RIG COUNT FELL 55 PERCENT FROM 680 TO 308 RIGS, WHILE NEW WELLS DRILLED DROPPED BY 30 PERCENT AND COMPLETIONS BY 35 PERCENT.

LESS NEW WELLS, COMBINED WITH THE CLOSING OF ECONOMICALLY MARGINAL PRODUCING PROPERTIES AND THE DECLINING REMEDIAL WORK ON OPERATING WELLS, LED TO A SHARP DROP IN OIL PRODUCTION. BASED ON CURRENT TEXAS RAILROAD COMMISSION DATA, IT IS ESTIMATED THAT THE STATE LOST 49 MILLION BARRELS OR 214,000 BARRELS PER DAY IN 1986. KNOWLEDGEABLE OBSERVERS IN THE STATE BELIEVE THAT IF CURRENT CONDITIONS PERSIST, AND THAT INCLUDES THE RECENT MODEST UPWARD CORRECTION IN CRUDE PRICES, THE DECLINE WILL BE EVEN GREATER IN 1987.

THIS BODES ILL FOR ANY HOPE TO MAINTAIN A REASONABLY SAFE

RATIO BETWEEN IMPORTED OIL AND DOMESTIC PRODUCTION ON THE U. S. MARKETPLACE. NATIONAL DATA IN DECEMBER, 1985 AND DECEMBER, 1986, INDICATE THAT IMPORTS OF CRUDE OIL AND REFINED PRODUCTS GREW BY 14.3 PERCENT TO COVER THE DECLINE IN DOMESTIC PRODUCTION AND THE INCREASE IN DEMAND. AS A CONSEQUENCE, THE RATIO OF TOTAL IMPORTS TO DOMESTIC OIL DEMAND INCREASED FROM 32.8 PERCENT TO 37.9 PERCENT, OR AN INCREASE OF 5.1 PERCENT DURING 1986. (SEE APPENDIX A)

THIS FACT SUPPORTS THE NATIONAL PETROLEUM COUNCIL'S CONTENTION IN ITS YET-TO-BE RELEASED STUDY THAT THIS SENSITIVE RATIO COULD EXCEED 50 PERCENT BY THE END OF THE 1980'S, IF NOT SOONER, AT CURRENT PRICE LEVELS. INCIDENTALLY, THE COUNCIL INDICATES THE ADVERSE FEATURES OF THE TAX REFORM ACT AFFECTING DRILLING INCENTIVES COULD, BY ITSELF, ADVANCE THE 50 PERCENT "PERIL POINT" RATIO TO AN EARLIER TIME THAN ANTICIPATED.

IT IS OUR UNDERSTANDING THAT FINANCE COMMITTEE CHAIRMAN LLOYD BENTSEN WILL ACTIVELY SEEK PASSAGE OF HIS BILL CALLING FOR REMEDIAL ACTION BY THE ADMINISTRATION IN THE EVENT THE RATIO BETWEEN IMPORTS AND DOMESTIC DEMAND EXCEEDS 50 PERCENT. SHOULD THIS BE THE CASE, TIPRO HOPES THAT THE BILL'S CONCEPT MIGHT BE BOLSTERED BY LISTING SPECIFIC REQUIREMENTS FOR THE ADMINISTRATION TO FOLLOW WHEN THE PERIL POINT IS BREACHED. MANY OF THESE REQUIREMENTS MAY WELL BE DEVELOPED BY THIS HEARING.

TIPRO WOULD PREFER REMEDIAL ACTION LONG BEFORE A 50 PERCENT RATIO IS REACHED. MANY OF ITS MEMBERS HAVE HAD TO DROP OUT OF

THE INDUSTRY DURING THE PAST YEAR, AND MANY MORE MAY NOT BE ABLE TO SURVIVE WAITING FOR FUTURE PERIL POINTS; THEIR PERIL POINT HAS ALREADY BEEN REACHED. HOWEVER, IF OIL IMPORTS MUST REACH THE SERIOUSLY HIGH LEVEL OF 50 PERCENT OF U. S. DEMAND TO COMMAND POLITICAL ATTENTION, THE ASSOCIATION URGES THAT A STRINGENT REMEDIAL PROGRAM BE READY FOR ACTION WHEN THE 50 PERCENT LEVEL OCCURS. PROTRACTED DELAY CAUSED BY PROGRAM DEVELOPMENT AFTER THE LEVEL OCCURS COULD WELL MEAN DISASTER TO NATIONAL SECURITY OBJECTIVES AND ENERGY CONSUMER NEEDS.

TIPRO DOES NOT OBJECT TO ANY OF THE REMEDIAL SUGGESTIONS THAT HAVE BEEN INCLUDED IN THE CHAIRMAN'S SERIES OF BILLS (SB 233, 255 AND 302). THIS IS ALSO TRUE OF SUGGESTIONS MADE BY OTHERS IN BOTH HOUSES OF CONGRESS DURING THE PAST YEAR. THERE ARE SOME, HOWEVER, THAT MIGHT BE MORE HELPFUL THAN OTHERS, IN OUR OPINION, IN RESTORING INCENTIVE TO EXPLORE AMONG, AND CONTINUE PRODUCTION OF EXISTING PROPERTIES BY INDEPENDENT PRODUCERS.

SPECIFICALLY WE WHOLEHEARTEDLY ENDORSE SB 255 CALLING FOR REPEAL OF THE WINDFALL PROFIT TAX AND THE FOLLOWING PROVISIONS INCORPORATED IN THE CHAIRMAN'S BILL SB 233:

1. AN INCREASE IN PERCENTAGE DEPLETION RATES WHICH IS RELATED TO THE ANNUAL REMOVAL PRICE OF OIL AND/OR GAS. IN CONNECTION WITH THIS PROVISION, WE RECOMMEND THAT SECTION 3(A) OF THE BILL BE BROADENED TO PROVIDE FOR THE CONVERSION OF NATURAL GAS PRICES PER MCF OR MMBTU TO THE

"Removal prices" of $10 to $20 (presumably per barrel).

2. Eliminate the 50% of net income limitation applicable to allowable percentage depletion.

3. Repealing the rule denying percentage depletion deduction subsequent to a transfer of proven properties.

4. Extending the exemption from windfall profit taxes provided for stripper well oil to production from transferred proven properties subsequent to the transfer of such properties.

5. Extend the definition of IDCs on oil and gas wells, which are subject to the election to deduct same, to include geological and geographical costs and surface casing costs.

6. Eliminate the "recapture" rule applicable to the gain from disposition of interest in oil, gas or geothermal properties.

In addition we would recommend providing for a tax credit of 15% applicable to costs incurred in connection with exploration activities.

An increase in the percentage depletion rates related to

PRODUCT PRICES AND THE ELIMINATION OF THE WPT NET INCOME LIMITATION BOTH TEND TO BOLSTER THE PRODUCER'S CONTINUED PRODUCTION FROM MARGINAL PROPERTIES. THE ADDITIONAL PERCENTAGE DEPLETION DEDUCTIONS PROVIDED BY SUCH PROVISIONS COULD FAVORABLY INFLUENCE A PRODUCER'S DECISION TO CONTINUE OPERATION OF PROPERTIES WHICH PRODUCE MARGINAL PROFITS.

REPEALING THE RULES DENYING THE PERCENTAGE DEPLETION DEDUCTIONS AND STRIPPER WELL WPT EXEMPTIONS ON PRODUCTION FROM TRANSFERRED PROVEN PROPERTIES COULD ENHANCE CONTINUED PRODUCTION FROM SUCH PROPERTIES. SITUATIONS MAY EXIST WHERE THE TRANSFEREE WOULD BE INTERESTED IN ACQUIRING PROPERTIES CURRENTLY PRODUCING NEGATIVE OR VERY MARGINAL ECONOMIC RESULTS TO THE TRANSFEROR, IF THE TRANSFEREE WOULD BE ENTITLED TO THE TAX BENEFITS PROVIDED BY REPEAL OF THE PROVEN PROPERTY TRANSFER RULES.

IN MANY CASES THE TRANSFEROR WOULD NOT BE CLASSIFIED AS AN INDEPENDENT PRODUCER AND WITHOUT THE AVAILABILITY OF THE DEDUCTION FOR PERCENTAGE DEPLETION AND/OR THE EXEMPTION FOR WINDFALL PROFIT TAXES WOULD BE INCLINED TO ABANDON THE PROPERTIES INVOLVED.

PERMITTING THE DEDUCTION OF GEOLOGICAL AND GEOPHYSICAL COSTS IN THE SAME MANNER CURRENTLY AVAILABLE FOR IDC WOULD ENHANCE EXPENDITURES RELATED TO SUCH ACTIVITIES WHICH SHOULD, IN TURN, RESULT IN THE DISCOVERY OF ADDITIONAL RESERVES. SUCH COSTS, ALONG WITH THE COSTS APPLICABLE TO SURFACE CASING ARE NORMALLY INCURRED PRIOR TO THE TIME WHEN IT IS KNOWN WHETHER OR NOT related reserves have been discovered as the result of drilling a well and have no salvage value.

A repeal of the "recapture" rule applicable to gain from the disposition of interests in oil, gas or geothermal properties would remove a factor which might inhibit the transfer of such properties by a producer to another party who might be interested in expanding the development of such properties. The transferor may not be interested in participating in such development but may be hesitant to consider a transfer due to the tax cost related to the recapture of IDC.

Providing for a tax credit applicable to expenditures for costs incurred in exploratory activities would provide an incentive for expansion of exploratory activities. In the current depressed economic environment surrounding the oil and gas exploration and production industry such an incentive would result in additional exploratory activities which, in turn, should result in the discovery of more reserves and an increase in domestic oil production.

In conclusion, Mr. Chairman, TIPRO hopes these remedial changes in the tax code can be pressed for immediately in the Congressional process. Our Association would also welcome their specific inclusion in the 50 percent peril point bill (S.2578) as definite guidelines for the Administration to follow in coping with the peril point emergency. TIPRO also recommends that the Administration be required to act within thirty days following

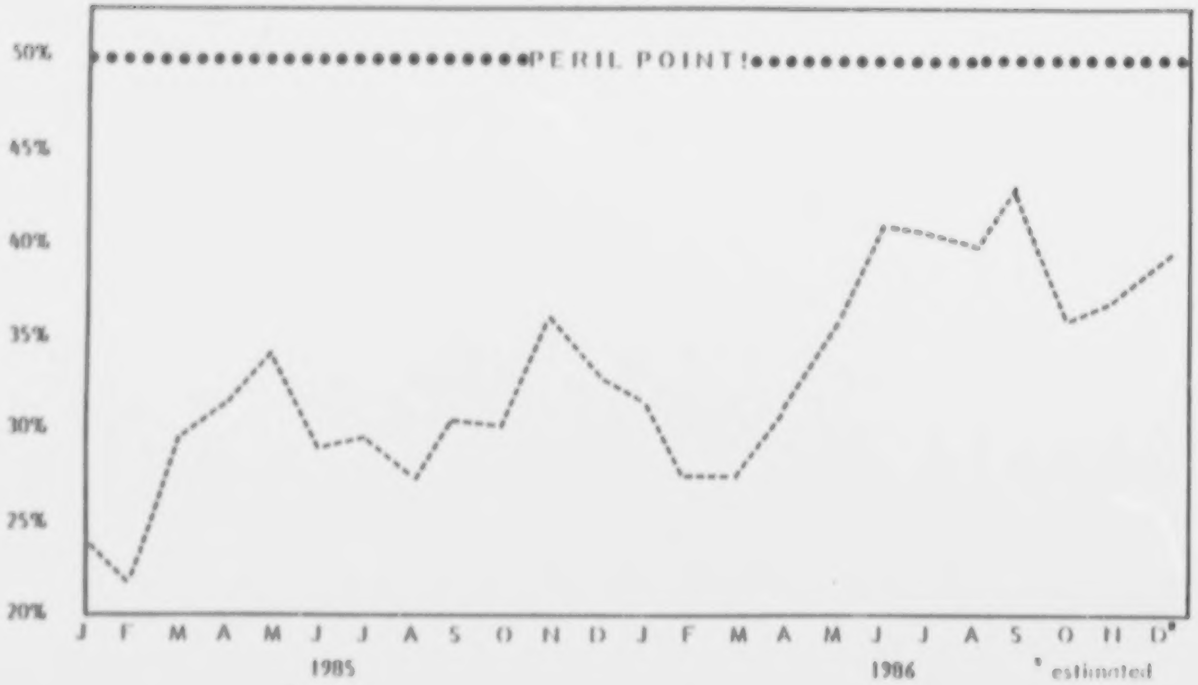
OCCURENCE OF THE PERIL POINT RATIO, IN THAT THE COMPUTATION OF THE CEILING LEVEL CALLED FOR IN SECTION 3(B) OF SB 2678, BE BASED ON CONSUMPTION FOR A 30 DAY PERIOD, ANDLIEU OF AN ANNUAL PERIOD: IT IS OUR BELIEF THAT THE NATION MUST MOVE QUICKLY TO CORRECT INADEQUATE DOMESTIC COVERAGE OF ITS ENERGY NEEDS.

RESPECTFULLY SUBMITTED,

FRANCIS L. DURAND

APPENDIX A

TOTAL IMPORTS AS PERCENT OF DEMAND
(Imports Include Crude Oil & Refined Products)



(Source: Derived from IPAA statistical information)

STATEMENT OF MR. MACK WALLACE, CHAIRMAN, TEXAS RAILROAD COMMISSION, AUSTIN, TX

Mr. WALLACE. Thank you, Senator Mitchell and Chairman Boren. Let me commend you all for holding these hearings, in order that this most important aspect of our strategic and economic life in this country be fully discussed. It is indeed "Wake up, America" time.

I have a short opening statement, and I have prepared for the record some written testimony which has been submitted.

My name is Mack Wallace. I am the Senior Member of the Railroad Commission of Texas, an elected state official, and I appear here in that capacity, as an individual elected official.

The Commission regulates, among other things, the exploration and production of oil and gas in Texas, and the transportation and sale of natural gas to the consumers of Texas.

Texas, incidentally, produces 30 percent of the natural gas produced in America and 30 percent of the crude oil, or an approximate thereof.

I am in the fourteenth year of my service on the Commission, and I have seen every energy czar we have had except the present one, including Governor Love, come and go. Therefore, I view it from the perspective of someone who has suffered through each of the difficulties that we have faced.

In February 1986 I testified before this subcommittee to urge that a fee be placed on imports of crude oil and refined petroleum products. At that time I advocated imposition of a fee to repel OPEC's assault, or more particularly the Saudi's assault, on our strategic domestic producing capacity. OPEC successfully employed its predatory tactics on the Free World's producers. America, once the fuel tank of democracy, was hit squarely by an intercontinental-calibre economic ballistic missile launched from the Middle East at our producing capacity. A year of watching this strategic industry being dismantled before our eyes has strengthened my belief that an import fee is necessary. I feel even stronger today than I did a year ago.

And support for this import tariff on crude oil and refined petroleum products is growing. When many of us started discussing this in 1983 and 1984, after looking at the world map and seeing what was inevitable, we were laughed at. We are no longer being laughed at today, and a number of people have joined the ranks.

Now, we have import tariffs on roofing shingles, neckties, asparagas, and an unbelievable number of other items which we read about in the newspaper every day.

I made a speech in Wyoming recently, and I asked those in the audience to stand up if they had ever stood in line to purchase a necktie. No one stood. [Laughter.]

On the other hand, I asked those to raise their hands who had stood in line or sat in line to buy gasoline, and the audience raised its hands in unison. I think there are some priorities here that the nation needs to address.

Why do I think the fee should be imposed?

Number one, we should consider crude oil and crude oil products as strategic minerals. They are not commodities like soybeans; you can't plant a crop or withhold a crop. It is a long-term strategic mineral.

People recognize that oil fuels a peacetime economy, of course. They also know that in time of military mobilization, oil fuels, a full array of military equipment including tanks, airplanes, jeeps, and so on—now they have changed the jeeps to hummers; we no longer have the jeeps that would get 21 miles to the gallon, but I think we've got a hummer that gets 2 miles to the gallon.

After World War II, it was said that the allies floated to victory on a sea of American oil. But does the average citizen know that the United States consumes 16 million barrels of oil a day? Does the average citizen know that in 1986 we imported almost 40 percent of this amount from unstable foreign sources? Probably not.

This is a critical energy issue. Does the average American citizen know that if nothing is done imports will probably reach 50 percent by the latest number, June of 1988? These things change as we testify here today.

Does the average citizen know that 75 percent of the crude oil produced in the world is produced by governments and not oil companies? Probably not. Therefore, the production and distribution of oil in the world is an instrument of foreign policy. If we lose our ability to compete in that arena, we cannot manage our own foreign policy. The average citizen probably does not know that.

The domestic oil industry is in a position to supply a high enough percentage of our oil needs to prevent dangerous dependence on imports. Our resource bases have shown they can provide relatively stable levels of production. We can do this well into the next century, but it takes foresight and prior planning, and a determination to do so.

We are in a debacle, a catastrophe, whatever you want to call it, today, and I will simply close—I see the red light approaches—by saying this: You cannot have a patient bleeding to death on an operating table from a jugular vein and run around, examine his feet, and prescribe bandaids for ingrown toenails.

Thank you, sir.

Senator BOREN. Thank you very much. You have made several excellent points, and I think one of those that I hope will be carried in the media to our citizens all across the country is the fact that you mentioned that 75 percent of the production is now produced by governments.

Mr. WALLACE. That's it.

Senator BOREN. And I think there is just not a full realization of that, and a full realization of what that means in terms of our national interests if we dismantle our own domestic productive capability as well as the interests not only for national security but the economic interests of consumers as well.

I want to thank all members of the panel.

[Mr. Wallace's written prepared testimony follows:]

TESTIMONY OF
MACK WALLACE, CHAIRMAN
RAILROAD COMMISSION OF TEXAS
BEFORE THE UNITED STATES SENATE
SUBCOMMITTEE ON ENERGY AND AGRICULTURAL TAXATION
COMMITTEE ON FINANCE

WASHINGTON, D.C.
JANUARY 30, 1987

Mr. Chairman and Members of the Committee:

My name is Mack Wallace. I am the Chairman of the Railroad Commission of Texas, the state agency which, among other things, regulates the exploration for and production of oil and gas and the transportation and sale of natural gas to the consumers of Texas.

I am in my fourteenth year of service on the Commission -- a tenure which commenced a few short weeks before the October, 1973, Yom Kippur War in the Middle East and the associated economic trauma inflicted on this country by the Arab Oil Embargo.

• • •

Nearly a year ago, at a time when crude oil prices were in virtual vertical descent, I informed this Committee of the pending devastation of America's productive capability, if something was not done. Sadly, I am here to confirm to you that the destruction I feared has indeed occurred. America -- once the fuel tank of democracy -- has been hit squarely by an intercontinental-caliber economic missile launched from foreign shores.

Mr. Chairman, I appreciate your providing this forum today to discuss this crucial matter. The damage to our strategic domestic oil and gas producing industry is both widespread and deep, but I believe it can be repaired if timely action is taken.

In my judgment, imposition of a variable fee on imports of crude oil and refined petroleum products would truly go a long way toward repelling OPEC's recent Saudi-led assault and toward enabling the producing industry in this country to rehabilitate itself -- and thereby benefit the nation.

My presentation in support of a fee is divided into four parts.

First, I will discuss the domestic drilling successes of 1979-1985 which added reserves equal to production. Importantly, and undoubtedly to the amazement of many, production itself ceased declining. In short, the U.S. resource base is better than a lot of people thought. We just need to develop it.

Secondly, I report on the grave damage occurring to the domestic industry as gauged by several indicators:

-- Exploration budgets have been axed; rigs are rusting, geologists are departing. In sum, the infrastructure is being severely eroded.

-- Annualized 1986 production figures, which include several good months of production, show a decline for Texas of about 6 percent.

-- Another production indicator, a comparison of the first month's production capability to near-year-end capability, shows that Texas' production dropped 10% from January, 1986, to November. Oklahoma's capability plunged 20%. Over this period, *on land*, *Lower 48* production dropped nearly three-quarters of a million barrels per day. Stable federal OCS production and a small increase for Alaska, indicate a *net* U.S. reduction of around 725,000 barrels per day.

Third, I analyze the national security implications of our weakened condition. Oil must be considered a strategic mineral because of its importance to the U.S., and as our domestic production declined, oil imports have skyrocketed, replacing secure U.S. production with cargoes originating in volatile Middle East kingdoms.

-- This *imperils* the independence of our foreign policy. As our dependence on imports increases, our vulnerability ratchets rapidly upward because of the fact that three-fourths of the world's oil is owned by governments who view its production as an instrument of foreign policy.

-- It *threatens* the stability and vitality of our domestic economy.

-- It *shatters* our ability to fuel *both* our military apparatus and our domestic needs in time of armed conflict. We will be unable to float the U.S. and its allies to victory on a sea of American oil as we did in World War II.

Fourth, I urge adoption of a temporary variable import tariff. For several reasons, it is the appropriate remedy for the current situation:

-- Governmental action would signal U.S. determination to buffer our foreign policy and domestic economy. An important new study by the Harvard University Energy and Environmental Policy Center provides particular insights into the real costs of imports.

-- A tariff at levels adequate to provide incentives for the domestic oil industry will also encourage development of alternate means in a post 2000 energy transition:

  o Imported oil bills are increasing at the rate of $1 billion per month.[1] Pouring that money into the domestic economy instead of foreign sultan's pockets would benefit all Americans.

  o The revenue collected could be used to:

    - fund energy research;
    - buy more oil for the Strategic Petroleum Reserve;
    - reduce the federal deficit.

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[1] Wall Street Journal, January 21, 1987, at 6.

Alternatively, the revenues could be distributed to the states in proportion to energy consumption.

-- A tariff, as in the case of existing oil import levies, can be a simple device. If no exemptions are permitted, it could be easily administered by Treasury as is currently the case.

I

DOMESTIC PRODUCERS' DRILLING RESPONSE TO PRE-1986 PRICE LEVELS PROVED VERY SUCCESSFUL AND PROSPECTS FOR CONTINUING TO ADD U.S. RESERVES EQUAL TO OR IN EXCESS OF PRODUCTION THROUGH 2000 WERE GOOD.

I begin on an optimistic note -- of what was and of what could be.

What Was

Earlier this morning, Dr. Bill Fisher, Director of the Bureau of Economic Geology, the University of Texas at Austin, recounted the good news for you that prior to the 1986 debacle aggressive drilling had arrested the near decade-long production decline of the mid-1970's and early 1980's in Texas as well as the rest of the U.S. lower 48 states. Drillers, motivated by price levels existing from 1979 through 1985, firmed up U.S. lower 48 crude reserve additions equal to production. And production, to the surprise of many people, was itself essentially stabilized.

What Could Be

The experience of the past several years showed that the U.S. oil and gas resource base could provide relatively stable levels of production well into the next century. Fundamentally, we were on a fairly gentle liquid hydrocarbon glide path into the post 2000 period, an era when other energy resources may predominate.

The January, 1986, oil price crash put the oil industry in a steep nosedive -- about the same impact the space shuttle disaster of the same month had on the nation's space program. Just as it is imperative that we resume our space missions, it is equally important that we take the steps necessary to restore our domestic oil and gas industry to pre-1986 levels to smooth the energy transition into the next century.

A Stable Economic Environment and a Return to 1985 Price Levels Work Is What Is Needed

What is needed is a stable economic environment at high enough prices to provide incentives to aggressively develop our resource base -- a base which has demonstrated the capability of supporting a strong domestic industry.[2]

I am fully confident that the domestic exploration and producing industry can be revitalized. But that will not happen until the potential for price gyrations such as those of the past year have been eliminated and a stable environment for investment in the industry has been established.

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[2] For the relationship between price and rig count, see appended Chart A.

This Committee has the instruments at hand to provide the needed help. I urge that you put them to use, for the aggressive pursuit of oil and gas resource bases in the U.S. is in the best interest of all Americans.[3]

II

OPTIMISM HAS TURNED TO DEEP DEPRESSION AS THE PRICE PLUNGE IN 1986 DEVASTATED THE OIL AND GAS INDUSTRY.

A. The Rig Count

In 1986, almost every article on the status of the oil industry mentioned the "rig count," the leading barometer of oil field exploration activity published weekly by Hughes Tool. As a result, it has gained almost as much familiarity as the venerable index measuring stock market activity -- the Dow Jones average. Right now, however, they differ sharply.

One is reflecting an ongoing economic feeding frenzy as money floods into corporate stocks; the other reflects doom as the floodgates of inexpensive-to-produce foreign oil -- opened predatorily -- sinks the domestic oil industry. I question how long these two indices can move in opposite directions at seemingly accelerating rates. Something will have to give.

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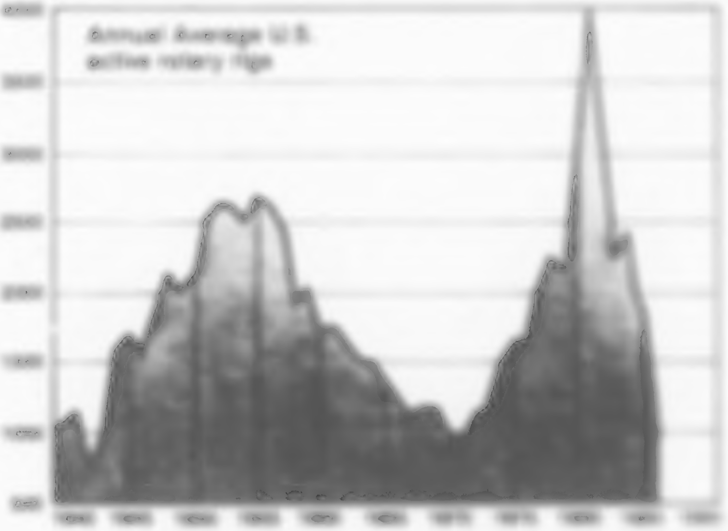
[3] Ironically, at the present time we are suffering from a glut of natural gas -- or at least the appearance of a surplus. Demand continues to decline (in part because cheap oil imports are "backing out" gas). But so does our natural gas delivery capability, since it is dependent on continued drilling. Constraints on demand, such as the Powerplant and Fuel Use Act, need to be lifted, and rigs put back to work developing this significant resource.

A look at the U.S. rig count shows why virtually each week's announcement by Hughes Tool was greeted with an exclamation. The count in 1986 averaged about one-half that of 1985 (963 compared with 1,980). In July, the count dropped below 700, a low exceeding any since recordkeeping commenced in the early 1940's.

We may not necessarily need a return to the 3,000-4,000 rig level of 1980-1982, although that would have tremendous significance for the energy independence of the nation if we were to do so. But what we do need, at a minimum, is activity at 1984-1985 levels.



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About two-thirds of Texas' wells are stripper wells -- 137,000 out of about 204,000 total oil wells. In 1985, the stripper category accounted for about one-fifth of the state's production. Railroad Commission operating districts which have mainly stripper production suffered severe declines. However, strong reserve growth areas of the Permian Basin served to buoy state production levels some. Still, the annual decline rate for Texas is projected at 6 percent -- equal to its greatest annual decline record which occurred in 1979.

On a January to November, 1986, comparison, as shown on page 10.1, Texas has experienced a 10.5% reduction, in its present productive capability.

C. There Will Be Truly Devastating Impacts on U.S. Productive Capability Later this Decade

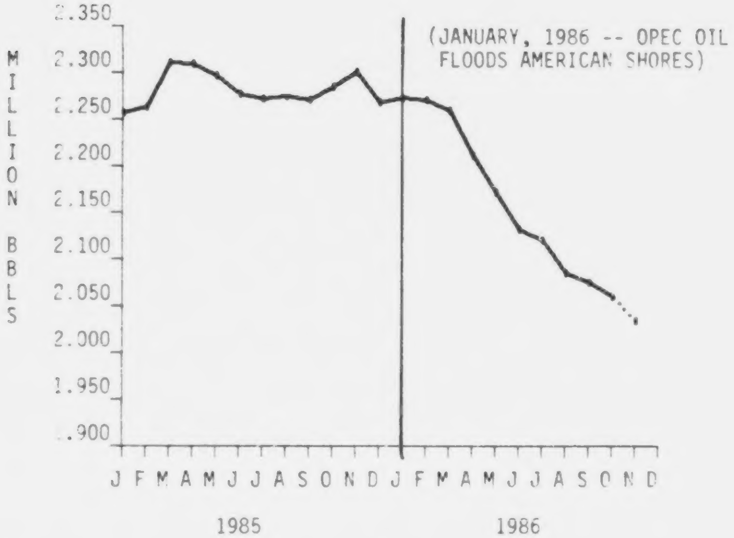
If the price of oil stays in the $15 to $20 per barrel range, severely reduced cash flow will continue to drastically curtail oil drilling, both for reserve growth and new field discovery, yielding a corresponding loss of reserve additions.

1. Lower 48

While additions, nearly equalled production over the past five years, the reduction in drilling at a $15 price will result in Lower 48 foregone reserve additions and total production loss of about 1.7 million barrels per day for the period 1987-1990. This loss, plus about 240,000 barrels per day of marginal production which will be lost in 1987 through 1990, totals about 2.0 million barrels per day. These reductions leave a 1990 annual

COMMISSIONER MACK WALLACE
JANUARY 20, 1987

TEXAS CRUDE OIL PRODUCTION
DAILY AVERAGE



THIS GRAPH SHOWS THAT SINCE JANUARY, 1986, DAILY AVERAGE TEXAS CRUDE OIL PRODUCTION HAS DECLINED ABOUT 238,000 BARRELS/DAY -- ABOUT A 10.5% REDUCTION.

YEAR-TO-YEAR COMPARISON

	1985	1986	Barrels/Day
January	2.256	2.272	+ 16,000
February	2.262	2.270	+ 8,000
March	2.310	2.259	- 51,000
April	2.309	2.211	- 98,000
May	2.296	2.171	-125,000
June	2.276	2.131	-145,000
July	2.271	2.120	-151,000
August	2.274	2.085	-189,000
September	2.270	2.075	-195,000
October	2.284	2.060	-224,000
November	2.300	2.034*	-266,000*
December	2.267		

* November, 1986 figures are estimates.

production level for the Lower 48 just under 4.8 million barrels per day.

2. Alaska

Alaskan North Slope production, now 1.875 million barrels per day and chiefly from the Prudhoe Bay Field, will go into normal decline in 1988. At an annual decline rate of 12 percent, this will reduce Alaskan North Slope production by about 400,000 barrels per day by 1990. While about 1 million barrels a day of additional capacity exists in already discovered, smaller fields on the North Slope, production and transportation costs will make this capacity uneconomical at $15 per barrel, and little or no back-out of Prudhoe Bay decline is anticipated.

Lower oil prices will further depress natural gas prices with corresponding declines in drilling and production capacity. This decline will result in a loss of about 350,000 barrels per day of natural gas liquids production by 1990.

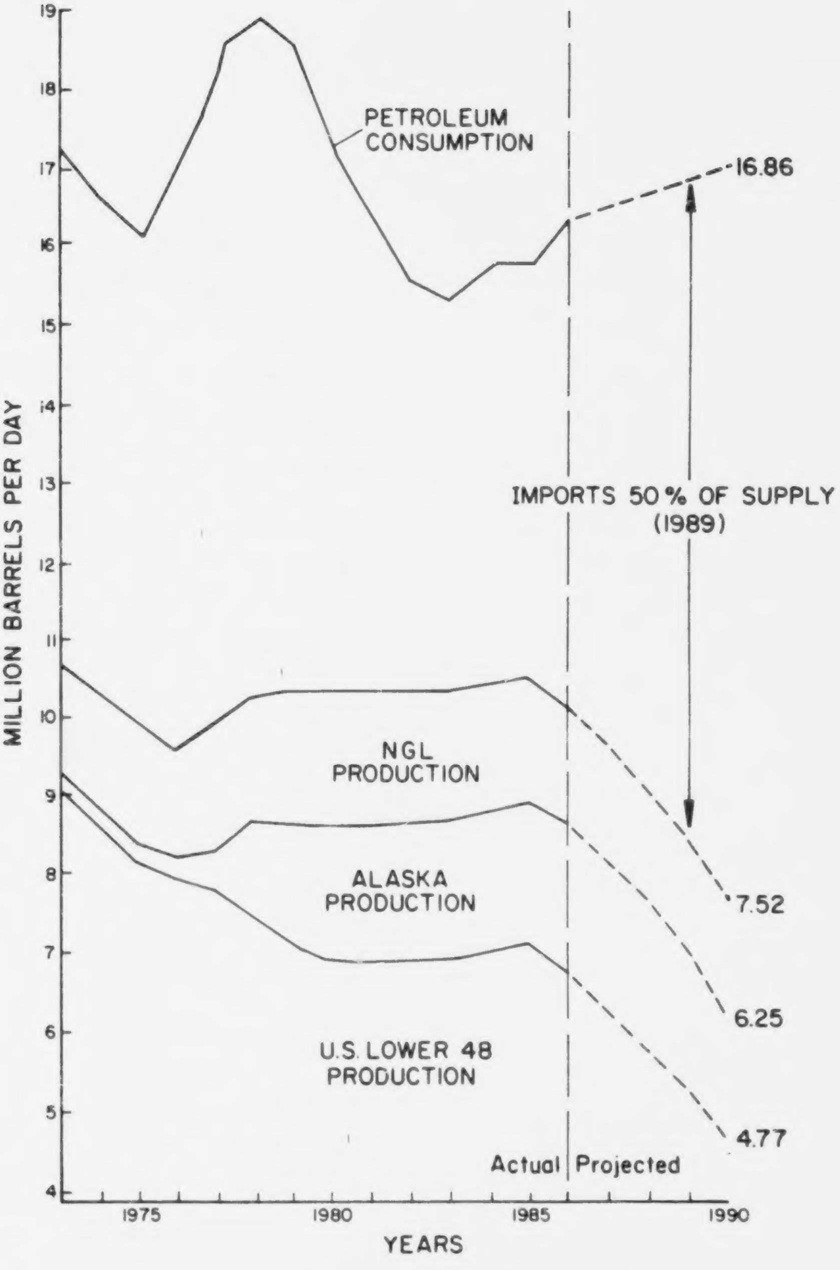
THE TOTAL PRODUCTION IMPACT BY 1990 (STARTING FROM THE 1986 PRICE PLUNGE) WILL BE A LOSS OF ABOUT THREE MILLION BARRELS PER DAY OF LIQUIDS, OR ABOUT 30 PERCENT OF TOTAL PRODUCTION CAPACITY. If prices fall below $15 per barrel, or if lower prices persist beyond 1990, the loss of production capacity obviously will be greater. See page 12.1.

D. Demand for Oil Will Increase at a Price of $15 per Barrel

U.S. consumption of oil and liquids has stabilized at about 15.5 million barrels per day over the past four years, after marked declines earlier. However, U.S. demand for petroleum in 1986 was up 3 percent over 1985 to 16.2 million barrels per day. Imports are currently running about 6 million barrels per day, or about 37 percent of consumption.

By 1990, demand could be between 16.5 and 17.5 million barrels per day. EVEN AT A CONSERVATIVE GROWTH RATE, OUR PROJECTED 1989-1990 IMPORT LEVEL'S WILL BE EQUAL TO THE HIGHEST LEVELS OF THE 1970'S. Indeed, it is possible that during 1989 imports will reach 50 percent of supply, exceeding the all-time historical high reached in 1977. We're sure to break this infamous record in 1990, and further into the 1990's -- if our production continues to decline at current rates -- imports could easily constitute two-thirds of our supply.

This Committee should act now to prevent dependence at these incredibly high levels of imports from becoming a stark reality.



U.S. PETROLEUM PRODUCTION AND CONSUMPTION
Projected production (assumes $16/barrel)
Projected consumption (assumes 1% annual increase)

III

OIL -- THE STRATEGIC COMMODITY

"Strategic . . . necessary or of great value or importance . . ."

Would any among you deny that oil is a strategic commodity? I don't believe so. Nor would the average American citizen, if he gave it a moments thought -- regardless of whether he is a resident of one of our great metropolitan or rural areas, in the North, South, East or West.

You -- and they -- recognize that oil fuels our peacetime economy and, in time of mobilization, also a full array of military apparatus. After World War II, it was said that the Allies "floated to victory on a sea of American oil."

Indeed, oil's significance is such that the last Administration apparently may have considered the use of tactical nuclear weapons to prevent the vast, cheaply exploitable, reserves of the Persian Gulf from falling into Soviet hands. See, "Was the U.S. Ready to Resort to Nuclear Weapons for the Persian Gulf in 1980?" Armed Forces Journal, September, 1986, at 92.[4]

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[4] In the Real War, Richard Nixon quotes former Soviet Leader Breshnev as stating: "It is our intention to deprive the West of its two main treasure troves: the oil fields of the Persian Gulf, and the strategic mineral resources of Central and Southern Africa." See W.C.J. Van Rensberg, Strategic Minerals, Vol. 1 at p. 2 (1986).

Obviously, in an ultimate sense, oil's greatest significance is undoubtedly military, for modern warfare -- short of an all-out nuclear holocaust, cannot be waged without it.

However, as a practical matter, oil's greatest significance is in its ordinary everyday use here in the continental United States where we are presently consuming about 16 million barrels per day. It powers the greatest transportation system in the world, lubricates and energizes manufacturing industries, and has at least 1,000 other important uses.

As the Oil and Gas Journal put it editorially this week, "Petroleum remains the cheapest, most versatile, and -- consequently -- most strategically important fuel."

The Crucial Question

Senators, in light of the importance of oil to Americans, how can we defend becoming dependent upon foreign sources for fifty percent of our needs? And, believe me, that is where we are headed -- by 1989 or 1990.

At the current rate of decline of the domestic industry, imports will supply one-half our needs by 1989 or 1990, and two-thirds by 1995 is a distinct possibility.

Preliminary annual data for 1986 shows that crude oil and product imports were up 17.6 percent over 1985 levels for a total of about 37 percent. Total U.S. imports from OPEC countries increased significantly. Imports from Saudi Arabia increased dramatically. (See appended charts.)

How short is our memory? Have we forgotten the disruption in 1973-1974 caused by the Arab Oil Embargo and, when shipments resumed, the price shock? Are we ready for another doubling of prices, such as in 1979-1980 following the attack on Mecca, the fall of the Shah of Iran, the elevation of the Ayatollah Khomeni, and the outbreak of the Iraq-Iran war?

Because of the importance of oil to our domestic economy, will we be able to conduct foreign policy independent of concerns over imports? Or -- since 75 percent of the world's oil is owned by governments who have no reluctance to view its production as an instrument of foreign policy -- will our own policies be hostage to the whims of others -- kings, sultans, potentates or merely military dictators?

Gentlemen, these are questions which you, as American leaders, should consider now. For, unless something is done, they will surely have to be answered sometime during your watch on the Ship of State.

Action now would obviate these inquiries. I believe a tariff on imports to stabilize prices at high enough levels to prompt aggressive pursuit of the U.S. resource base, as in the period 1979-1985, would eliminate or forestall to a distant time these questions.

It has been said that the economic decline of the Roman Empire was attributable in part to the fact that "production of cereals was discouraged by the competition of cheap grain from

Sicily, Africa and Egypt."[5] Oil is similarly situated in this society. You should act now to maintain a vigorous domestic producing industry by adopting a fee on imports.

IV

AN ORDINARY TARIFF SUCH AS THAT APPLICABLF TO OTHER IMPORTED "STRATEGIC" GOODS LIKE ROOFING SHINGLES, NECKTIES AND ASPARAGUS IS ALL THAT'S NEEDED.

We levy fees on all sorts of imported goods every day through our system of tariffs administered by the Department of Commerce, Department of Treasury and other federal agencies.

Indeed, I understand there is presently a small fee applicable to some petroleum goods.[6] I would propose that the existing levy merely be modified in the form and along the lines of bills introduced by several of the distinguished members of this Committee, e.g., variable fee applicable to all imports of crude oil and refined petroleum products.

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[5] Durant, Caesar and Christ, p. 631 (1944).

[6] See February 27, 1986, statement before this Subcommittee by J. Roger Mentz, Acting Assistant Secretary (Tax Policy), Treasury, indicating these tariff rates range from five cents per barrel on certain crudes to 84 cents per barrel on certain refined products.

A

I see no reason for exempting imports from any country. If, for foreign policy purposes, we would like to achieve the same result for an individual country as an exemption, then I would propose that the matter be handled in a regular bilateral manner by the State Department separate and apart from the tariff.

B

I have no specific recommendation on how the revenues generated by the fee should be spent. We certainly need to give greater priority to energy research and using the fee proceeds for such funding certainly seems logical -- our energy security would be doubled, now and in the future. Other alternatives, including reducing the federal deficit,[7] significantly increasing Strategic Petroleum reserve volumes or distributing the funds to the states in proportion to energy (or just oil) consumption may also merit consideration.

C

An import tariff would send a clear signal to oil producing countries that we are going to shore up our domestic capability and declare that we are fully prepared to protect this country's huge investment in our resources and the infrastructure for producing them.

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[7] See the Congressional Budget Office's April 1986 study, The

(Footnote Continued)

Let's briefly consider just some of the costs incurred in 1986 to our energy infrastructure as a consequence of OPEC's Saudi-led predatory pricing assault.

-- $80 billion or so in synfuels and other alternative energy systems;

-- the rusting of many and dismantlement of some of the more than 3,000 rigs (some of which have been bought for a few cents on the dollar by foreigners for their own use or for scrap iron);

-- the unemployment of 50,000 dedicated highly-trained professionals such as geologists and the loss of a much larger number of oil industry related jobs.

Furthermore, this damage is not confined to the energy industry. We have an integrated economy, and in 1986 it became apparent that devastation in a sector contributing as significantly to GNP as that of energy impacted the rest of the economy.

D

Originally -- in the Spring of 1986, many economists and other economic soothsayers were likening the reduction in oil prices to a giant tax cut which would be a boon to the U.S. economy. The tremendous losses incurred in the energy sector

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(Footnote Continued)
Budgetary and Economic Effects of Oil Taxes, showing how the deficit would be reduced under the five proposals evaluated there.

were totally overlooked -- or grossly underestimated -- in that evaluation. So was the importance of this sector of the economy to the rest of it.

By mid-year, the earlier euphoria had started to wear thin. A leading economist, Mr. Alan Greenspan, who was the Chief Economist during the Ford Administration, commented in the TV program, "The Nightly Business Report," on June 30 that

> The extraordinary economic bonanza that many analysts had expected as a consequence of the sharp drop in oil prices is clearly taking its time in arriving...

Significantly, Mr. Greenspan pointed out that:

> We are gradually beginning to understand ... that the sharp drop in oil prices created almost as much uncertainty and disruption as did the sharp increases in 1973 and then again six years later.

Mr. Greenspan went on to explain that the level of oil prices is a major factor in industrial costs, but once general price levels have adjusted to new higher or lower oil prices, business goes on as usual and economic growth returns to its normal pace. In contrast, oil price volatility, as Mr. Greenspan observed, suppresses economic activity.

I do not know whether Mr. Greenspan favors a fee. However, I believe his observations of the effects of wildly gyrating prices shows that an import fee would help both producers and consumers by stabilizing the price of oil. The effect of a fee would be to put a floor under crude oil. As a result, consumers would know the cost to them and the producing industry could plan.

E

An important new study by Harvard University Energy and Environmental Policy Center, "Oil Tariff Policy in an Uncertain Market," Broadman and Hogan (November 1986) warns that U.S. dependence on imported oil poses a renewed threat to the country's energy and national security. The study calls for an immediate imposition of a $10 a barrel tariff on all imports.

The fundamental basis for the fee, according to this study, is the fact that the market price currently paid for imported oil by U.S. consumers does not reflect the true cost of dependence on insecure sources of oil supply. The authors of the study state that "rather than advocating protectionism for the U.S. oil industry, what we are calling for is protection for the consumers against future oil shocks." They view it as an insurance policy against the risks of future disruptions.

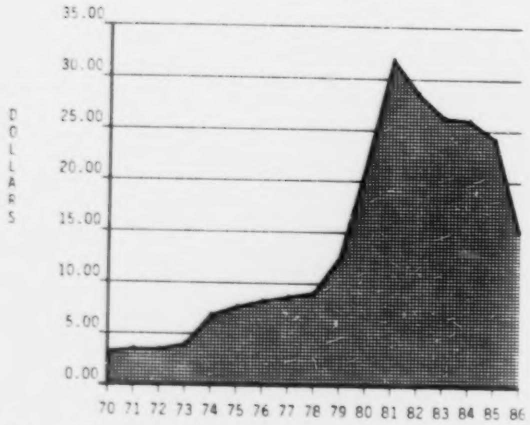
F

Let a tariff on imports become the cornerstone of a bipartisan domestic energy policy for which all can share in the responsibility. In turn, all Americans, in my judgment, would benefit, if you follow this course.

****

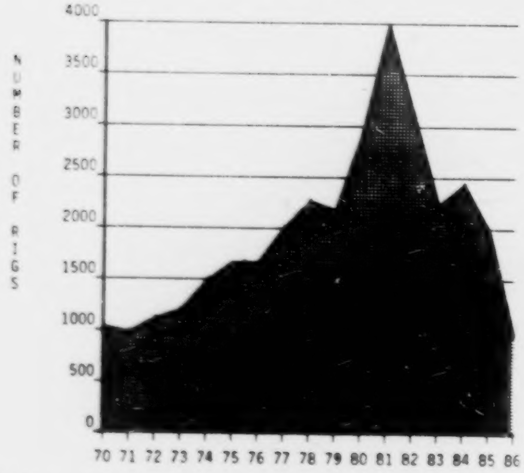
Thank you. I will be happy to respond to any questions you may have.

MW 1/30/87
Chart A



AVERAGE ANNUAL WELLHEAD PRICE OF U.S. CRUDE OIL
1970 - 1986

SOURCE: U.S. ENERGY INFORMATION ADMINISTRATION



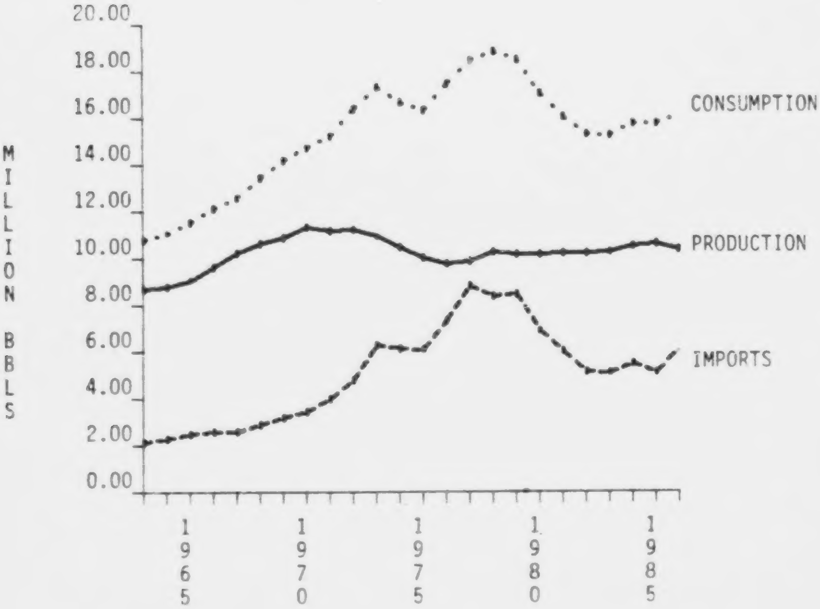
AVERAGE ANNUAL U.S. RIG COUNT
1970 - 1986

SOURCE: HUGHES TOOL CO.

The number of drilling rigs operating in the United States fell by 49 for the week reported January 26, 1987, settling at 837. The rig count at this time last year was 1,671. The comparable 1985 figure was 2,370.

MW 1/30/87
CHART B

U.S. CRUDE AND NATURAL GAS LIQUIDS
PRODUCTION, CONSUMPTION AND IMPORTS
1963 - 1986
(IN MILLION BARRELS PER DAY)



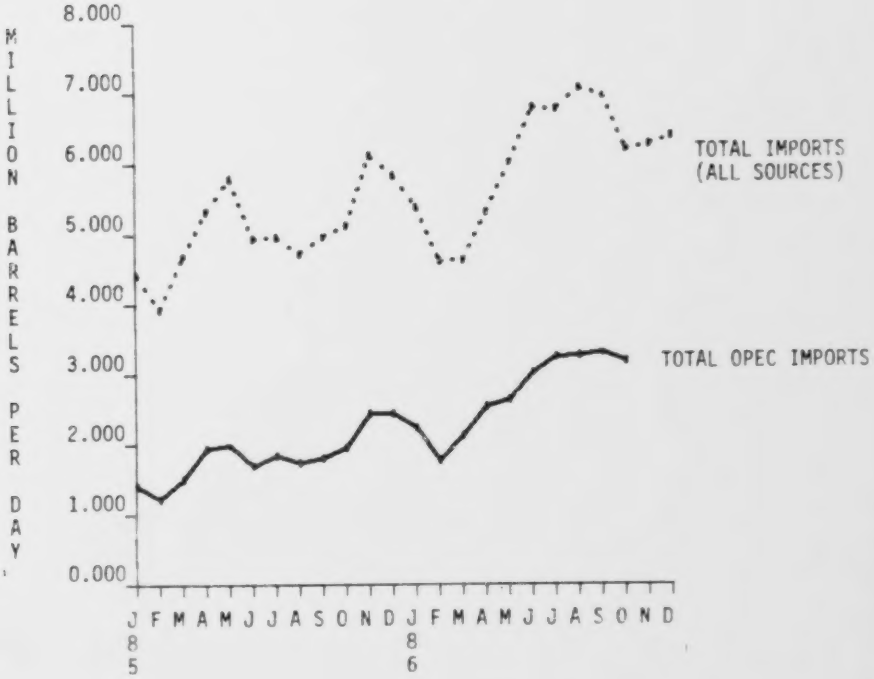
NOTE: 1986 FIGURES ARE PRELIMINARY.

1986 AVERAGES
(MILLION BARRELS PER DAY)

CONSUMPTION - 16.1
PRODUCTION - 8.67
IMPORTS - 6.04

MW 1/30/87
CHART C

TOTAL U.S. CRUDE OIL AND PETROLEUM PRODUCT IMPORTS
(ALL SOURCES)
1985 - 1986
(IN MILLION BARRELS PER DAY)



NOTE: THE FIGURE FOR TOTAL IMPORTS (ALL SOURCES) FOR THE MONTH OF DECEMBER, 1986, IS AN ESTIMATE.

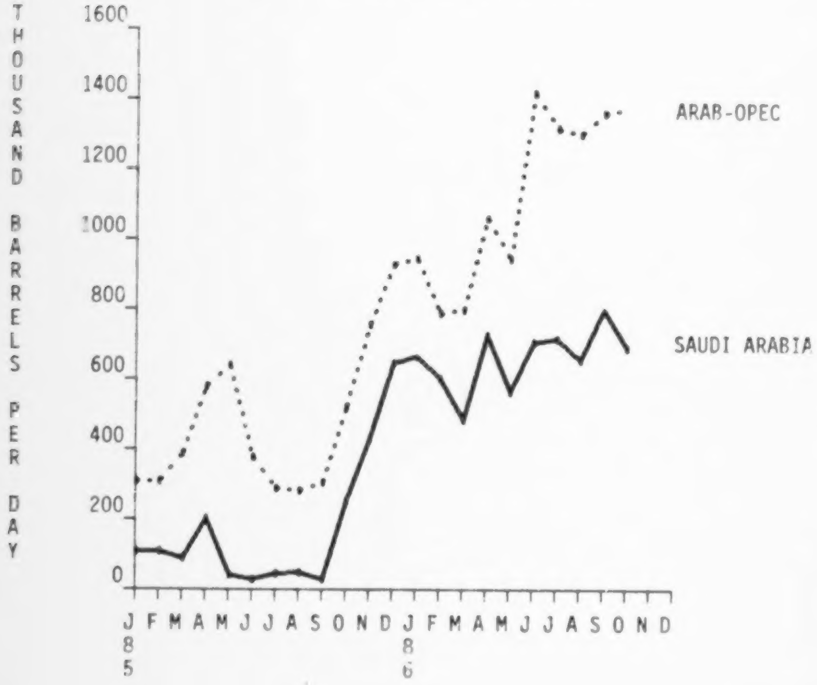
1986 AVERAGES
(MILLION BARRELS PER DAY)

TOTAL IMPORTS - 6.04
(ALL SOURCES)

TOTAL OPEC IMPORTS - 2.74

MW 1/30/87
CHART D

U.S. CRUDE OIL AND PETROLEUM PRODUCT IMPORTS
FROM SAUDI ARABIA AND TOTAL ARAB-OPEC
1985 - 1986
(IN THOUSAND BARRELS PER DAY)



ARAB-OPEC: ALGERIA
IRAQ
KUWAIT
SAUDI ARABIA
UNITED ARAB EMIRATES

1986 AVERAGES
(BARRELS PER DAY)

ARAB-OPEC - 1,132,000
SAUDI ARABIA - 658,000

NOTE: 1986 DATA IS THROUGH OCTOBER.

Senator Boren. Mr. Durand, I appreciate also your specific reference to the bills that are pending here before us, and your expression of support for them. Is it my understanding that TIPRO as an organization favors some kind of a floor price mechanism or some kind of an import fee mechanism?

Mr. Durand. A variable oil import fee.

Senator Boren. And as I understand now, IPAA supports a floor price mechanism. Is that correct?

Mr. Singer. Senator, the Association does support a floor price which would be tied to an import fee under prescribed circumstances, as is contained in the statement submitted along with my testimony.

Senator Boren. And has IPAA taken a position on the individual provisions of bills like that we have before us, in terms of the transfer rule and the net income limitation, and these other provisions?

Mr. Singer. Senator, I had the opportunity to work with a number of IPAA committees in the last few years, and I can say unequivocally that there is no provision in any of the three bills that you have offered which we would not wholeheartedly support. We don't think that those will go all of the way, but we definitely support the approach you are taking and appreciate your efforts.

Senator Boren. I think that is a happy note on which to thank this panel for its excellent testimony. I have learned not to ask any follow-up questions when you get a good answer.

Thank you, each and every one of you, for taking the time and making the effort to be here. I think you have contributed an immense amount to the education of the Congress and the public, in terms of the threat which we face.

I would like to ask the members of our third panel now to come forward: Mr. Jack Taylor of the American Association of Petroleum Geologists in Oklahoma City; Mr. William Bradford, the Senior Vice President for Operations of Dresser Industries; Mr. Carl Bolch, the First Vice President of the Society of Independent Gasoline Marketers; and Mr. William Kenny III, President of Meenan Oil Company and President of the Independent Fuel Terminal Operators Association.

We are very, very pleased to have all of you here and are appreciative of your taking the time to come, and also to have the patience to wait to appear at this time in the hearing. But I think you will agree that while you have been waiting, we have heard some very, very interesting testimony already this morning. And I appreciate your contribution to it.

Mr. Kenny, we will just commence with you at this time and have a statement on behalf of the Independent Fuel Terminal Operators Association.

STATEMENT OF WILLIAM F. KENNY, III, PRESIDENT, MEENAN OIL CO., AND PRESIDENT, INDEPENDENT FUEL TERMINAL OPERATORS ASSOCIATION, SYOSSET, NY

Mr. Kenny. Thank you very much, Mr. Chairman. I, too, have a complete statement which has been submitted for the record.

Senator Boren. It will be entered in the record.

Mr. **Kenny**. My name is Bill Kenny. I am President of Meenan Oil Company, located in Syosset, New York. With me today is Mr. Don Mitchell from Connecticut, who is the Director of the New England Fuel Institute.

Our company supplies home heating oil to 110,000 homes in New York, New Jersey, and Pennsylvania. I am pleased to be appearing on behalf of a coalition of petroleum product marketers. This coalition includes the Empire State Petroleum Association, the Independent Fuel Terminal Operators Association, the New England Fuel Institute, and the Independent Gasoline Marketers Council. We represent the marketers of most of the home heating oil and residual fuel which is sold from Maine to Florida, and gasoline marketers throughout the United States. A brief description of these organizations is included in my written testimony.

These organizations and the more than 1,500 petroleum marketers they represent are firmly opposed to oil import fees, whether in the form of a flat $5 or $10 fee added to the cost of imports or a variable fee designed to establish a floor price for domestic petroleum.

These forms of protectionism are inflationary and anti-growth. They are excessive intrusions of government into the energy marketplace that will likely have serious adverse effects.

As a matter of tax policy, import fees are aggressive and inefficient. The Department of Energy estimates that oil import fees will generate only 7 cents in net revenue for every dollar in cost to the economy. Thus, they represent bad tax policy and would not help to reduce the deficit.

Import fees would seriously harm the national economy and would discriminate against oil-consuming sectors and regions of the country, particularly the Northeast. In addition, they would hamper the U.S. competitive position in world trade. And, we are all aware of 'competitiveness, and what it seems to mean in Washington today. Accordingly, import fees are inefficient economic policy.

Crude oil import fees would create uneconomic incentives to drain America first; thus, depleting the resources needed for a future emergency.

I might say there is an excellent article making this very point that was recently published by the Dallas Federal Reserve. I don't know if you had a chance to see that, Mr. Chairman.

Import fees on petroleum products would be even more costly, impairing the competitive viability of independent petroleum marketers without any benefits to oil producers.

These long-term adverse impacts far outweigh any short-term benefits that such legislation would confer on domestic producers or refiners. Thus, import fees are costly and anticompetitive energy policy.

Because of the sharp drop in prices and the impact on the independent producing sector and related industries, they do merit some special consideration to avoid undue hardships and to increase exploration and production incentives. However, such special treatment must not be in the form of import protection, which deprives Americans of a choice of competing fuels and suppliers as well as the benefits of economic growth, higher employment, and lower inflation that falling oil prices have already begun to provide. Such special treatment must not force U.S. energy prices to levels above our competitors in world markets. It must not unfairly favor independent refiners over independent marketers, and such special treatment must not be based on illusory deficit reduction benefits that take as much revenue from the Treasury as they provide.

Action must be taken to restore the domestic producing sector, but this action must not involve control of petroleum prices. We learned in the 1970's that government could not efficiently regulate the maximum price of petroleum. It will be equally difficult and create comparable unfairness if government regulates the minimum price of petroleum.

We need strong and thriving domestic refiners and producers. We also need a secure supply and a competitive price. Accordingly, we support use of the Tax Code to guarantee a strong domestic producing and refining sector. We support elimination of the windfall profits tax, expansion of depletion, and full deductions for actual costs. In addition, in the non-tax arena, we support decontrol of natural gas, substantially increased oil purchases for the Strategic Petroleum Reserve, both from domestic producers and from Mexico. And by the way, the reference to the fact that 40 percent is coming from unstable sources is just not right; it is a very small portion of that. And prompt development of enormous domestic reserves that we have on the Arctic Coastal Plain.

I also speak as a member of the broader Energy Tax Consumer Coalition, which includes more than 25 organizations, representing petroleum consumers, including airlines, truckers, chemical companies, utilities, petroleum marketers, and public interest groups. This coalition also stands united against increased energy taxes or fees, and will remain so. A copy of a letter just sent to the President last year by this coalition is included in my written testimony.

I guess what I am saying here is that there is a lot of opposition. We have, for example, as I said, 110,000 customers in the Northeast. Back in the 1970's and the early 1980's they were going through absolute hell, comparable I think to what is going on now in the Southwest, which I sympathize with.

These people were told to conserve. They went out and spent a lot of money buying new furnaces, insulating houses, spending tons of money. They were told this would reduce their bill; this would make the price of oil fall. It did. It worked. Now, we just find it very difficult to go back to them and say, "Now the government is going to raise the price of oil, after what you did helped lower it."

I appreciate very much the opportunity to talk today. Thank you very much.

Senator BOREN. Thank you, Mr. Kenny. I appreciate your point of view, and I understand your point of view.

Let me ask this question: If we were to have some sort of an import fee mechanism, would you have any position on whether or not there should be a differential in such a proposal between refined product and crude oil?

Mr. KENNY. I thought I said earlier that we were very much against that, and we are very much against that.

Senator BOREN. Against the differential?

Mr. **Kenny**. Absolutely, very much against it.

Senator **Boren**. What is the reason for opposition to it?

Mr. **Kenny**. Well, I think we are against the whole concept of any kind of a fee.

Senator **Boren**. I understand that.

Mr. **Kenny**. Clearly, if you had a fee of $5 on crude oil and then put another $3 on top of that, or whatever the number might be, it would just make it that much worse.

Senator **Boren**. So if I understand you, you have expressed concern about an increase of the level of imports coming into the country; in other words, a percentage of dependence on overseas sources going up. But the thrust of what you would recommend would be tax incentives, use of the Tax code in order to make domestic production profitable enough to increase production levels and avoid dependence, rather than the use of a fee?

Mr. **Kenny**. I think you have noticed today from our first witness here today, Senator, myself, and perhaps others, that there is a lot of opposition to the oil import fee. I think that your bill S. 233 is an admirable one, and the others that you have proposed. I would propose that we unite behind those good things that we all agree on and get on with it. Let us get going on that, instead of this sort of totally-focused emphasis on the import fee and the resultant antagonism it seems to breed.

Senator **Boren**. Thank you very much.

Our next witness will be Mr. Bradford, Senior Vice President for Operations for Dresser Industries.

Mr. Bradford, we are glad to have you this morning.

[Mr. Kenny's written prepared testimony follows:]

STATEMENT
of

WILLIAM F. KENNY, III

Appearing on Behalf of

EMPIRE STATE PETROLEUM ASSOCIATION
INDEPENDENT FUEL TERMINAL OPERATORS ASSOCIATION
NEW ENGLAND FUEL INSTITUTE
INDEPENDENT GASOLINE MARKETERS COUNCIL

on
TAX INCENTIVES TO
ENHANCE DOMESTIC OIL PRODUCTION

before the
UNITED STATES SENATE
COMMITTEE ON FINANCE
SUBCOMMITTEE ON ENERGY AND AGRICULTURAL TAXATION

Washington, D.C.
January 30, 1987

I. Introduction

Mr. Chairman, my name is William Kenny, III. I am President of Meenan Oil, based in Syosset, New York. I am pleased to be appearing on behalf of a coalition of petroleum product marketers. This coalition, including the Empire State Petroleum Association, the Independent Fuel Terminal Operators Association and the New England Fuel Institute and the Independent Gasoline Marketers Council, represents the marketers of most of the home heating oil and residual fuel oil from Maine to Florida, and gasoline marketers throughout the United States. A complete description of these organizations is included in Attachment A.

These organizations, and the more than 1,500 petroleum marketers they represent, are firmly opposed to oil import fees, whether in the form of a flat $5 or $10 fee added to the cost of imports, or a variable fee designed to establish a floor price for domestic petroleum prices. These forms of protectionism are inflationary and anti-growth; they are also excessive intrusions of government in the energy marketplace that will likely have serious adverse effects. If it were not for the devastation suffered in the oil producing states during the past year, I believe you would be opposed to such an intrusion as well.

As a matter of tax policy, import fees are regressive and inefficient; the Department of Energy estimates that oil import fees will generate only 7 cents in net revenue for every $1.00 in cost to the economy. Thus, they represent bad tax policy and would not help to reduce the deficit.

Import fees would seriously harm the national economy, and would discriminate against oil consuming sectors and regions of the country, particularly the Northeast. In addition, they would hamper the U.S. competitive position in world trade. Accordingly, import fees are inefficient economic policy.

Crude oil import fees would create uneconomic incentives to "drain America first", thus depleting the resources needed for a future emergency. Import fees on petroleum products would be even more costly, impairing the competitive viability of independent petroleum marketers, without any benefit to oil producers. These long term adverse impacts far outweigh any short term benefits that such legislation would confer on domestic producers or refiners. Thus, import fees are costly and anticompetitive energy policy.

From 1973 until 1986, petroleum prices were maintained by OPEC at levels significantly exceeding any cost basis. Over the past year petroleum prices have fallen from these excessive levels. Because of the sharp drop in prices, the independent producing sector and related industries may merit some special consideration to avoid undue hardships and maintain production incentives. However, such special treatment must not be in the form of import protection, which deprives Americans of a choice of competing fuels and suppliers, as well as the benefits of economic growth, higher employment, and lower inflation that falling oil prices have already begun to provide. Such special treatment must not force U.S. energy prices to levels above our competitors in world markets. It must not unfairly favor independent refiners over independent marketers. And such special treatment must not be based on illusory deficit reduction that takes as much revenue from the Treasury as it provides.

Action must be taken to restore the domestic producing sector, but this action must not involve control of petroleum prices. We learned in the 1970's that government could not efficiently regulate the maximum price of petroleum. It will be equally difficult, and create comparable unfairness, if government regulates the minimum price of petroleum.

Petroleum marketers are an integral part of our industry. We need strong and thriving domestic refiners and producers; we also need a secure supply and a competitive price. Accordingly, we support use of the tax code to guarantee a strong domestic producing and refining sector. We support elimination of the Windfall Profits Tax, expansion of depletion and full deductions for actual costs. In addition, in the non-tax arena, we support substantially increased oil purchases for the Strategic Petroleum Reserve, both from domestic producers and from Mexico; and prompt development of the enormous domestic reserves on the Arctic Coastal Plain.

I also speak as a member of the broader Energy Tax Consumer Coalition which includes more than 25 organizations representing petroleum consumers, including airlines, truckers, chemical companies, utilities, petroleum marketers and public interest groups. This coalition also stands united against increased energy taxes or fees, and will remain so. A copy of a letter just sent to the President last year by this Coalition is included as Attachment B.

I urge this Committee to direct its attention to modifications in the Tax Code designed to increase profitability and cash flow for independent producers, and to avoid proposals to establish a minimum price for petroleum through fees. Oil import fees create major imbalances among industries and regions, and are seriously regressive. Accordingly, such proposals polarize the petroleum industry and the nation as a whole; and they will divert the energies and attention of this Committee, and the Congress generally, from serious plans to assist domestic producers, such as S.233, that merit immediate consideration.

II. Oil Import Fees Would Seriously Harm the Economy

A. Adverse Macroeconomic Effects

Oil import fees protect the domestic oil and gas industry at an enormous cost to the economy. Studies of the macroeconomic impact of fees or tariffs on imported crude oil uniformly conclude that the national economy would suffer substantial losses. There is no doubt that economic growth would be impeded; it is estimated that a $10 fee would cause a decline in GNP from 1.0 to 2.6 percent.[1] Equally certain, unemployment would increase by up to 600,000,[2] and inflation would increase by up to 2.6 percent.[3] The precise magnitude cannot, of course, be projected, but the conclusion is clear: an oil import fee will impose a substantial drag on the U.S. economy.

The magnitude of this drag is not lessened by the decline in the price of crude oil. Last year's decline in oil prices does not reduce the burden to the economy from oil import fees; it simply alters its absolute and psychological effects. Whether the price of crude oil is $8 or $18 or $28 per barrel, a $10 oil import fee will eliminate 1 to 2 percent of GNP growth, and add 1 to 2 percent to the rate of inflation.[4] Moreover, such a fee will create a price shock to all consumers, since product prices already have declined. A $10 imports fee will increase prices for oil products and competing fuels by about $.24 per gallon.

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[1] *See* Consumer Federation of America, "The Energy, Economic and Tax Effects of Oil Import Fees" (October 25, 1985), Table ES-1 at p. iv, included as Attachment C ("CFA Study"). For the purposes of macroeconomic analysis, it is irrelevant whether a $10 fee is imposed entirely on crude oil, or partly on crude oil and the remainder on petroleum products. The critical fact is that petroleum product prices would rise by about $10 per barrel, or $.24 per gallon.

[2] *See* Attachment C.

[3] This inflation impact is measured by the change in the Consumer Price Index. *See* Attachment C.

Just as oil import fees burden the economy, decreases in oil prices produce a substantial positive effect on growth. The decline in crude oil prices in 1986 kept inflation to its lowest level in decades, and helped to spur further declines in interest rates. American consumers are now enjoying the benefits of lower oil prices in their home heating oil bills and at the gasoline pump. By increasing oil prices to 1985 levels, an oil import fee would rob the economy of this powerful engine for growth, which may be the most positive economic force in more than 20 years.

B. Minimal Deficit Reducing Effects

Oil import fees would not only inhibit growth induced by falling oil prices, but would also counteract the deficit reducing effects of falling oil prices. Proponents of oil import fees greatly exaggerated the favorable impact on budget reduction. Those who claim that a $5 oil import fee will generate $8 billion in revenue include only its direct revenue impact; they fail to consider the lost revenue to the Treasury from slower growth and the substantially greater government expenditures caused by higher oil prices.

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[4] Thus, if falling oil prices help to generate GNP growth of 4 percent, an oil import fee would reduce the growth rate to 2-3 percent. If GNP were only expected to grow by 1 percent without an oil import fee, the fee will likely cause a recession. In fact, each of the seven major oil price increases since World War II has been followed within nine months by a recession.

In 1983 and 1984, studies on this subject were conducted by the Department of the Treasury, the Department of Commerce, and the Congressional Budget Office. Each concluded that the U.S. economy would benefit significantly from a decline in oil prices, and that the federal deficit would be reduced substantially. The Treasury analysis concluded that a 40 percent decline in oil prices would reduce the annual deficit by $6 billion to $10 billion and a 24 percent decline would yield an annual saving of $4 billion to $5.5 billion.[5/] CBO stated that "a sizable and permanent decline in oil prices would have a very favorable effect on inflation and on economic growth in the United States, and would significantly reduce the projected baseline budget deficit. . . ."[6/] CBO calculated that a permanent $8 per barrel

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[5/] Treasury Department Interagency Study of Falling Oil Prices, Chapter II, p. 2 (1983) See Attachment D.

[6/] CBO, "Economic and Budgetary Consequences of an Oil Price Decline -- A Preliminary Analysis" (March 1983) at p. 1. See Attachment E.

reduction in oil prices would reduce the unified budget deficit by a cumulative total of $129 billion over five years.[7]

The precise effect of falling oil prices on the budget deficit from 1987 to 1991 is impossible to project. But the direction and order of magnitude of these effects are clear: lower oil prices generate significant increases in taxes, and reduce federal outlays that are directly related to oil prices and that are tied to a cost of living escalator. Oil import fees would eliminate these benefits. In short, oil import fees will contribute little if anything to deficit reduction, and may actually increase the federal deficit.

C. Inefficiency of Oil Import Fees as a Tax

1. Windfall to Producers

The fundamental reason why oil import fees contribute so little to deficit reduction is their inefficiency. Oil import fees tax only oil imports, which are less than 40 percent of total U.S. oil consumption, and less than 16 percent of total U.S. energy consumption.[8] However, because oil imports are the marginal sources of oil in the U.S., the price of oil imports establishes the price for domestic production of crude oil and natural gas liquids. Therefore, consumer prices for all oil products increase by approximately the amount of the fee. However, the Treasury obtains revenue only from the portion that is imported, and possibly from increased windfall profit taxes on domestic production.[9] Accordingly, the predominant portion of the increased consumer expenditures for oil flow to domestic producers, not the federal Treasury. As a result of this effect, the Energy Information Administration estimates that for every dollar in cost to the economy from oil import fees, only 7 cents would be raised in net revenues.[10]

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[7] *Id*. at pp. 16-17. *See* Attachment E. Significantly, declines in oil prices below $20 per barrel will generate substantially greater deficit reduction effects than declines above $20 per barrel, which were analyzed by CBO and Treasury. Declines above $20 produce a significant loss of windfall profit tax revenues to the federal Treasury, while declines below $20 produce almost no loss to the Treasury from windfall profit tax revenues. *See* Crude Oil Windfall Profit Tax Act of 1980, P.L. 96-223, I.R.C. Sec. 4989. Thus, the deficit reducing effects of a decline in oil prices from $25 to $15 per barrel would be substantially greater than the effects of a decline from $30 to $20 per barrel.

2. Increases in Federal Outlays

Oil import fees, or energy taxes, are also inefficient because of their effect on federal outlays. Every analysis of oil import fees concludes that such outlays will increase substantially. Primarily, outlays will increase for petroleum products and related purchases, particularly by the Department of Defense; for programs with benefits indexed to a cost of living adjustment; for interest payments; for unemployment insurance; and for low income energy assistance. The Treasury analysis concludes that a reduction in oil prices of $8 per barrel will result in a $10 billion annual decline in federal expenditures;[11/] the CBO analysis projects savings of $110 billion over 5 years from a similar $8 decline in oil prices.[12/] In summary, the combined effects of oil import fees on federal revenues and expenditures demonstrates its gross inefficiency as a revenue raising measure.

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[8] Petroleum accounts for about 40 percent of total U.S. energy consumption. See, e.g., DOE/EIA State Energy Data Report (May 1986) at pp. 14-20.

[9] Windfall profit taxes do not apply to most production below $20 per barrel, and do not apply to any production currently below $18.35 per barrel.

[10] See Energy Information Administration, "The Impact of Lower World Oil Prices and Alternative Energy Tax Proposals on the U.S. Economy" (April 18, 1986).

D. Trade Effects of Oil Import Fees

Some proponents have suggested that oil import fees would produce significant benefits to the U.S. balance of trade. To the contrary, an oil import fee would not significantly reduce the U.S. trade deficit because it would create serious trade problems for many U.S. industries. Petroleum imports accounted for approximately $48.3 billion of the U.S. trade deficit in 1985. Oil impact payments were $75.6 billion in 1981; Since that year, the petroleum component of the U.S. import bill has declined from 28.9 percent to about 14 percent. Clearly, the massive increase in the U.S. trade deficit has not been caused by

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[11/] See Attachment D.

[12/] See Attachment E.

oil imports. If no protectionist action is taken by the Congress, and the recent reduction in world crude oil prices is not immediately reversed, there will be further substantial reductions in the bill for petroleum imports in 1986, probably on the order of $15-20 billion.

However, if oil import fees are enacted, the U.S. will impose on its domestic industries energy prices that are significantly higher than those paid by the rest of the industrial world. This differential will place a severe competitve burden on all energy intensive U.S. industries, such as chemicals, agriculture, steel, wood and paper products, mining and plastics. These industries will be subject to greater import penetration, and will have much greater difficulty competing in foreign markets.

The competitive damage to these industries would more than likely offset any modest reduction in the trade deficit resulting from decreased oil imports.13/ These are the industries on which we must depend to restore a positive U.S. balance of trade.

14/ If an oil import fee reduced the level of oil imports by 10 percent, for example, the trade deficit would decline by about $3.5 billion.

III. Oil Import Fees are Unsound Energy Policy

A. Oil Import Fees Will Result in Uneconomic Production of Oil

It is impossible to quantify the cost of production for domestic oil and gas, because the cost varies from field to field and well to well. For this reason, any import fee or price floor will provide windfalls to some producers and deny profitable production to others.

However, it is certain that establishment of any price floor for domestic crude, or imposition of any import fee, will lead to production of domestic oil and gas that is not economic in the current environment. In effect, it would create incentives to drain America first. In the short run, this may decrease oil imports; but in the long run, this premature production will injure U.S. national security.

There is no energy security basis for increasing domestic crude oil production today. The world is awash in oil. U.S. import sources are secure and diverse. The principal suppliers to the U.S. include Mexico, Canada, the United Kingdom, Venezuela, Nigeria and Indonesia. These are the countries that have made the investments and commitments that have created the surplus in world crude markets and have helped to reduce our dependence on Arab OPEC; yet these are the countries that would be injured most by a U.S. oil import fee.

Accordingly, oil import fees will drain U.S. reserves at a time when there is no security threat; these reserves will be unavailable five or ten or twenty years from now when the world oil market may present a threat, and these reserves, if available, could then be used to prevent or temper supply shortages. Thus, overproduction today could lead to energy security problems in the future.

B. There is No Basis for a Higher Import Fee on Petroleum Products

1. Effect of Fees on Petroleum Products

If Congress determines that import fees on crude oil are necessary, despite their gross inefficiency and adverse effects, an equivalent fee should be placed on all imported products, rather than a higher fee on products. Without an equivalent fee, there is an incentive to import products that are less expensive than products refined domestically. However, there is no legitimate basis for fees on imported products significantly higher than fees on imported crude. Such a differential would seriously injure competition in the petroleum market by imposing tremendous barriers to product imports.

If higher fees are placed on imported products, the effect on consumers would be the same as higher fees on all petroleum imports, since the price of all domestically refined products would rise to the price of the marginal import. Thus, a fee of $5 per barrel on imported crude oil, and $10 per barrel on imported petroleum products, would create the same macroeconomic burdens as a fee of $10 per barrel on imported crude oil. However, even less revenue would be raised than from a fee of $10 on crude oil. In addition, a differential fee on crude oil and products would split the windfall to the domestic industry between producers and refiners, thereby diminishing the revenues that could be used by producers for exploration and development.

An import fee differential of $5 per barrel would provide the domestic refining industry with a revenue increase of about $70 million per day, amounting to about $25 billion per year. A comparable windfall would be bestowed on the natural gas industry, which competes with petroleum products, not crude oil. An import fee differential of $3 per barrel for petroleum products would generate approximately $15 billion in additional revenues for refiners.

2. Refiners Do Not Need Protection from Imports

Domestic refiners have not demonstrated the need for protection from imports, particularly on such a massive scale. In fact, imports of petroleum products in 1986 were lower than the levels of product imports during almost every year of the 1970's, and were below the levels of 1984. Other than residual fuel oil, the highest national import penetration for any petroleum product in 1986 was 7.4 percent for distillate.

IV. Rebates to Heating Oil Consumers Will Not Work

Proposals for import fees sometimes purport to provide an exemption, or a rebate, for fuel oil used in home heating. We, as heating oil marketers, know that these schemes will not effectively eliminate the burden that oil import fees would place on the nation's 14 million home heating oil consumers. Moreover, any such program is destined to result in a complex scheme of exemptions and entitlements that creates more problems than it solves. The complex, regulatory bureaucracy required to administer the oil price control program under the Emergency Petroleum Allocation Act of 1973[14] should serve as a lesson to those who think any program of price supports can be implemented simply and effectively.

It is illusory to exempt imported home heating oil from import fees and expect that heating oil prices will not rise. On an annual basis, less than 200,000 barrels per day of heating oil is imported, yet winter distillate consumption averages well over 3 million barrels per day. Most of the home heating oil used on the East Coast is domestically refined and therefore will reflect the increased cost of domestic crude oil.

Moreover, if heating oil is exempt from import fees, much greater amounts would be imported, because the cost of domestically refined product would have to reflect the higher price of crude oil in the U.S. Domestic refiners would, to the extent possible, curtail production of distillate. However, it is highly unlikely that imports could supply nearly all of the demand for heating oil, because the increased demand from offshore refineries would increase the price of these imports. Ultimately, heating oil imports would increase, domestic refiners would suffer and heating oil prices would increase to reflect the fee on domestic crude oil.

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[14] 15 U.S.C. Section 751 *et seq.*

It is also impossible to require refiners to pass through the fee on products other than home heating oil. This form of cost allocation was tried, and failed, in the 1970's under the Emergency Petroleum Allocation Act. Even if it were possible, it would require a comprehensive scheme of refiner pricing regulation.

In addition, it is impractical to provide tax refunds to home heating oil consumers. Refunds through the income tax system would fail to cover many of the poor and elderly who do not file returns, and could miss millions of renters completely. Moreover, there will be reluctance on the part of Congress to provide refunds to oil heat consumers but not to consumers of other fuels for home heat and other essential users.

Finally, even if it were possible to hold heating oil consumers harmless. there will be other sectors and industries that claim, and may merit, special protection. For example, to avoid discrimination against the Northeast, industrial and utility consumers of residual fuel should be exempt, as should manufacturers of petrochemicals for export. Any system of exemptions or rebates will require a regulatory bureaucracy, much like the one that was dismantled in 1981. This is a high price to pay for eliminating gross inequities, yet it will be necessary if import fees are imposed.

V. Tax Incentives are Needed to Spur Production

U.S. oil production declined in 1986, and will continue to decline indefinitely, unless substantial new incentives are provided. The National Petroleum Council ("NPC") projects that U.S. production will decline from 8.9MMBpd in 1985 to 8.0 MMBpd in 1990 and 7.0MMBpd in 1995, assuming high petroleum prices.[15] Clearly, price supports will not reverse this decline; but tax incentives that help to ease the loss from unproductive development will encourage independent investment, and ultimately create additional production.

Our basic tax provisions governing oil and gas development were last modified in 1979, when the energy climate was very different from today. Oil producers were reaping large windfalls that resulted from OPEC's massive increase in the world price of oil. Price incentives provided more than adequate economic encouragement to all possible development.

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[15] NPC, __________ (______, 1986).

These price incentives are no longer available, and the consequence is a massive decline in new well development and exploration budgets. It is time to restore the tax incentives for production that existed before 1973, and increase the cash flow available to independent producers. Domestic producers can no longer earn windfalls, by any reasonable standard. Accordingly, the Windfall Profits Tax should be repealed. In many cases, domestic producers cannot even earn any profit. Thus, current deductions are meaningless. Modifications must be made that permit independent producers to deduct costs from prior or future earnings.

In addition, property owned by independent producers should receive the same tax treatment, whether or not that property was previously owned by an integrated major. Congress should repeal the "transfer rule" that prohibits percentage depletion and exemption from windfall profits tax, simply because the producing property is purchased from a major. Independent producers need these incentives to develop existing properties and generate the cash flow needed to develop new properties.

Congress should also take steps that would directly stimulate cash flow for independent producers. S.233 contains several such provisions, including repeal of the limit on use of percentage depletion to 50 percent of the income of a property; repeal of the recapture rule for intangible drilling costs; and modification of the deduction for geological costs to permit expensing, rather than capitalization of these costs. We as independent marketers support enactment of these provisions.

VI. Conclusion

From 1973 to 1981, the U.S. sought to control the maximum price of crude oil and petroleum products. The experience was a dismal failure, acknowledged by most of its proponents. It did not insulate the U.S. from higher world oil prices, but it did create enormous distortions and inequities among producers and consumers, some of which were rectified by complex regulatory and entitlement programs. This experience will be repeated if the U.S. seeks to control the minimum price for crude oil and petroleum products through import fees.

Even if questions of equity and administration could be resolved without complex regulation, which is unlikely, the system would not work. Oil has become a commodity, and to control the prices of any commodity, one must control production.

Without the ability to control production, and hence the world price, there is no basis on which to predict the burdens that an import fee or a floor price would impose on the U.S. economy. At the levels proposed, U.S. energy costs would be twice that paid by the rest of the world. The harm to the U.S. competitive position in world trade could be enormous.

Equally important, there is no sound reason for denying to the American economy and its consumers the benefits of lower oil prices that will be enjoyed by the rest of the industrial world. These benefits will not only spur investment, employment and growth, they will also lead to substantial reductions in the federal deficit.

As with any commodity, oil prices will be cyclical and unpredictable, and hence investment is risky. Action must be taken to guarantee continued investment in domestic production. Special tax treatment for oil production is one necessary component, in recognition of this risk and as an incentive to explore and produce. In addition, energy security should be enhanced by continuing to build the Strategic Petroleum Reserve, which provides our best defense against any possible interruption of imports in the future; and by commencing development of the Arctic Coastal Plain, which could maintain Alaska's production for decades to come.

Thank you.

ATTACHMENT A

COALITION OF INDEPENDENT MARKETERS

The Empire State Petroleum Association represents the independent gasoline distributors and home heating oil marketers of New York State.

The Independent Fuel Terminal Operators Association is comprised of 16 companies which own and control terminals capable of receiving ocean-going tankers. None is affiliated with a major integrated oil company. Members of the Association are independent marketers of No. 2 fuel oil, No. 6 fuel oil, gasoline and other petroleum products.

The Independent Gasoline Marketers' Council is a trade association of non-branded independent retailers of motor gasoline. Counsel members operate groups of retail stations under their own brand name and operate in 45 of the 50 states.

The New England Fuel Institute is an association of more than 1,100 independent retail and wholesale home heating oil distributors throughout the six New England states.

ATTACHMENT B
Page 1 of 2

February 21, 1986

President Ronald Reagan
The White House
Washington, DC 20500

VIA MESSENGER

Dear President Reagan:

The undersigned associations and organizations--representing a broad range of consumer, labor, agriculture, transportation, environmental, manufacturing, utility, and small business interests throughout the nation-- are unanimous in their long standing opposition to additional energy taxes, including fees, as a means to raise revenues. We believe that such taxes are inflationary and inequitable.

The economic benefits to the nation of lower energy prices include lower inflation, higher economic growth, lower interest rates, strengthened foreign trade and increased opportunity for individual enterprise. These benefits should not be undercut by a new tax. We hope that you will continue to oppose any new energy taxes.

Sincerely,

Air Transport Association
American Boiler Manufacturers Association
American Trucking Associations
Chemical Manufacturers Association
Citizen/Labor Energy Coalition
Consumer Energy Council of America
Consumer Federation of America
Council of Industrial Boiler Owners
Edison Electric Institute
Empire State Petroleum Association
Independent Fuel Terminal Operators Association
Independent Gasoline Marketers Council
Independent Petroleum Association of America
National Coal Association
National Consumers League
National Council of Senior Citizens
National Farmers Union
National Grange
New England Council
New England Fuel Institute
Northeast Coalition for Energy Equity
Owner Operator Independent Drivers Association of America

ATTACHMENT B
Page 2 of 2

Pennsylvania Petroleum Association
Petrochemical Energy Group
Petroleum Marketers Association of America
Portland Cement Association
Society of Independent Gasoline Marketers of America
The Society of the Plastics Industry, Inc.
Travel Tourism and Government Affairs Policy Council
  American Automobile Association
  American Bus Association
  American Car Rental Association
  American Hotel and Motel Association
  American Recreation Coalition
  American Sightseeing International
  American Ski Federation
  Association of Retail Travel Agents
  Conference of National Park Concessioners
  Gray Line Sight-Seeing Association
  Highway Users Federation
  Hotel Sales Management Association International
  International Association of Amusement Parks & Attractions
  International Association of Convention & Visitor Bureaus
  National Air Carrier Association
  National Campground Owners Association
  National Caves Association
  National Council of Area and Regional Travel Organizations
  National Council of State Travel Directors
  National Council of Travel Associations
  National Restaurant Association
  National Ski Areas Association
  National Tour Association
  Recreation Vehicle Industry Association
  Travel Industry Association of America
  United States Travel Data Center
  United States Tour Operators Association
United States Chamber of Commerce
Union Carbide

cc: The Honorable Thomas P. O'Neill, Jr.
The Honorable Robert Dole
The Honorable Bob Packwood
The Honorable Pete V. Domenici

ATTACHMENT
Page 1 of 3

Consumer Federation of America

THE ENERGY, ECONOMIC AND TAX EFFECTS OF OIL IMPORT FEES

OCTOBER 1985

TABLE ES-1

ESTIMATED ECONOMIC IMPACTS OF IMPORT FEES

(In Percent)

SOURCE OF ESTIMATE	SIZE OF FEE	GNP CHANGE	CPI CHANGE	UNEMPLOYMENT CHANGE
Whartona/	$5	-1.3	+1.3	na
CBOb/	$5	- .5	+ .5	+.2
DOE/DRIc/	$5	- .5	+ .5	+.3
CRSd/	$5	- .9	+ .5	+.3
Historical Record	$10	-1.7	+ .7	+.5
DRIe/	$10	-1.4	+ .7	+.5
CBOb/	$10	-1.2	+ .9	+.4

SOURCES:

a/ Wharton Econometric Associates, *Long Range Forecast* Business Week, April 5, 1982.

b/ Congressional Budget Office, *Oil Import Tariffs: Alternative Scenarios and Their Effects* (Washington, D.C.; April, 1982).

c/ U.S. Department of Energy, *Economic Impact of an Oil Import Fee* (Washington, D.C.; March 19, 1982).

d/ Congressional Research Service, *Revenue and Macroeconomic Impacts of an Oil Import Tax: A Brief Review.* (Washington, D.C.; April 6, 1982).

e/ Press accounts.

ATTACHMENT C
Page 2 of 3

TABLE ES-2

ESTIMATES OF REVENUE LOSSES AND NET REVENUES FROM AN IMPORT FEE

	PERCENT OF TOTAL INCREASE IN THE OIL AND GAS BILL			$10 FEE (Billions)
	CONSUMER ENERGY COUNCIL[a]	CONGRESSIONAL BUDGET OFFICE[b]	DEPARTMENT OF ENERGY[c]	
TOTAL BILL	100%	100%	100%	$72
GROSS REVENUE	54	54	54	39
REVENUE OFFSETS	22-30	13	36	10-27
NET REVENUE	21-31	40	17	12-29

SOURCES:

[a] Consumer Energy Council of America, *A Comprehensive Analysis of the Impact of A Crude Oil Import Fee: Dismantling a Trojan Horse* (Washington, D.C., April, 1982).

[b] Congressional Budget Office, *Oil Import Tariffs: Alternative Scenarios and Their Effects* (Washington, D.C.; April, 1982).

[c] U.S. Department of Energy, *Economic Impact of an Oil Import Fee* (Washington, D.C.; March 19, 1982).

ATTACHMENT C
Page 3 of 3

TABLE ES-3

SOURCES OF IMPORTS INTO THE UNITED STATES SINCE THE OIL EMBARGO

(Thousand Barrels Per Day)

YEAR	TOTAL		OPEC	ARAB	CANADA	MEXICO	UNITED	OTHER
	CONSUMPTION	IMPORTS		OPEC			KINGDOM	NON OPEC
1973	17308	6256	2993	915	1325	16	15	465
1974	16653	6112	3280	752	1070	8	8	340
1975	16322	6056	3601	1383	846	71	14	300
1976	17461	7313	5066	2424	599	87	31	353
1977	18431	8807	6139	3185	517	179	126	590
1978	18847	8363	5751	2963	467	318	180	484
1979	18513	8456	5637	3056	538	439	202	548
1980	17506	6909	4300	2551	455	533	176	491
1981	16508	5996	3323	1848	447	522	375	534
1982	15296	5133	2146	854	482	685	456	627
1983	15231	5051	1862	632	547	826	382	701
1984	15726	5437	2049	819	630	748	402	902
1985	15577	4817	1612	434	772	829	293	835

NOTE: The 1985 imports are the average of the first five months annualized.

SOURCE:

U.S. Department of Energy, Monthly Energy Review (Washington, D.C.: August, 1985) pp. 42-43.

DEPARTMENT OF THE TREASURY
CHAPTER II: ECONOMIC
IMPACT ON THE UNITED STATES

ATTACHMENT D

Addendum

Economic Impact of a $25 Per Barrel Price of Oil

The preceding analysis is based on a $13 drop in the world market price of oil to $20 per barrel. If the price of oil drops only $8 to $25 a barrel, the economic impact obviously would be smaller than that estimated for an oil price of $20 per barrel. Using an analytic framework that parallels the preceding one, a price reduction of $8 per barrel would yield a transfer of about $15.6 billion from foreign oil producers to U.S. users of oil. Part of this $15.6 billion would be spent on additional oil imports, i.e., about 1 million barrels per day or $10.4 billion, leaving $5.2 billion available for the purchase of domestic goods and services. This $5.2 billion would be an increment of about .15 percent to nominal GNP unless offset by reduced purchases from the United States by oil producing nations.

In addition to the transfer of income from foreign producers, an $8 reduction in the price of oil would transfer $30 billion of income from domestic producers of crude oil to domestic users. In total, the approximately $35.2 billion that would be available to the nonoil sectors of the economy would represent slightly less than 1 percent of GNP at the level two years from now.

The direct effect of the drop in oil prices on the overall level of prices for domestically purchased goods and services would be to lower it by about 1 percentage point or slightly more than the increase in real domestic output. To this would be added perhaps another 0.6 to 0.7 percentage points for the effects of lower oil prices on the costs of producing other goods and services. Finally, secondary effects through escalator clauses, etc., might tend to widen this further, but these effects would tend to be undone as real nonoil production expanded toward capacity.

If the price of oil drops $8 a barrel, leading to a real GNP increase of about 1 percent, there could be a modest reduction in the unemployment rate of perhaps 0.4 to 0.5 percentage points. This would translate into higher employment by about 400,000 to 500,000 persons.

The effect of an $8 or 24 percent decline in oil prices would reduce the budget deficit by approximately $4 billion to $5.5 billion. This deficit reduction would be the net effect of a reduction in tax receipts of $4.7 billion to $6 billion and a reduction in outlays of about $10 billion.

ATTACHMENT E
Page 1 of 2

ECONOMIC AND BUDGETARY CONSEQUENCES
OF AN OIL PRICE DECLINE -- A
PRELIMINARY ANALYSIS -- MARCH 1983

CONGRESSIONAL BUDGET OFFICE

Effects on the Federal Deficit

Permanently lower oil prices would have significant effects for projected federal budget deficits over the next five years. While the net reduction from the CBO baseline deficit projections would be quite small in 1984, it would increase to as much as $31 billion by 1988 under the $6 per barrel lower price scenario.

The net effect of lower oil prices for federal revenues would be relatively small throughout the five-year projection period (1984-1988). Gross windfall profit tax collections would be lower as shown in Table 5. Substantial reductions in domestic crude oil prices would mean that some domestically produced oil would no longer give rise to any windfall profit tax liability. Lower inflation would also reduce federal revenues, but this would be more than offset by revenue gains derived from greater real growth in the economy. As a result, the net effect of the economic changes portrayed in Table 4 on federal revenues would be modest. Relative to CBO's baseline projections, federal revenues would be $10 to $13 billion higher in 1988 under the lower oil price scenarios.

The net effect of lower oil prices for federal outlays would be greater than for revenues because all of the economic changes would work in the same direction. Projected cost-of-living adjustments for Social Security and other indexed benefits would be smaller as a result of lower inflation. Lower interest rates would reduce net interest costs. Lower inflation and unemployment would also reduce projections for other benefit programs such as food stamps, assistance payments, Medicare, and Medicaid. In addition, projections for federal employee pay raises and for nondefense discretionary spending would be somewhat lower. Finally, lower oil prices would reduce the cost of oil purchases by the Defense Department and for the Strategic Petroleum Reserve (an off-budget spending program). As shown in Table 5, the net outlay reductions of a $6 per barrel lower oil price would grow from $6 billion in 1984 to $21 billion in 1988.

It should be emphasized that the favorable effects of the petroleum price reduction on the federal deficit result from the assumed stimulation of real economic growth. If real growth does not accelerate in response to the oil price decline (for example, if it is neutralized by changes in monetary policy), then the budget effects would be much less favorable.

TABLE 5. BUDGET DEFICIT EFFECTS OF ALTERNATIVE LOWER OIL PRICE PATHS
(Changes from baseline projections, by fiscal year, in billions of dollars)

	1984	1985	1986	1987	1988	Cumulative Five-Year Total
Oil Prices $4 Lower:						
Windfall profit tax (gross)	1	1	1	1	1	5
Other revenues	-4	-6	-7	-11	-14	-44
Indexed benefits and unemployment insurance	*	-2	-2	-3	-3	-10
Interest costs	-1	-2	-2	-3	-5	-13
Other outlays	-1	-1	-1	-1	-1	-5
Total Deficit Effects	-6	-10	-12	-17	-22	-66
Oil Prices $6 Lower:						
Windfall profit tax (gross)	3	3	3	3	3	15
Other revenues	-3	-5	-5	-10	-13	-36
Indexed benefits and unemployment insurance	-2	-4	-5	-6	-7	-25
Interest costs	-4	-5	-7	-7	-9	-32
Other outlays	-1	-3	-4	-4	-5	-17
Total Deficit Effects	-6	-14	-17	-23	-31	-94
Oil Prices $8 Lower:						
Windfall profit tax (gross)	6	5	5	4	4	24
Other revenues	-4	-5	-6	-12	-17	-44
Indexed benefits and unemployment insurance	-2	-6	-8	-10	-10	-38
Interest costs	-5	-7	-9	-11	-13	-45
Other outlays	-2	-4	-6	-7	-8	-27
Total Deficit Effects	-7	-17	-24	-36	-45	-130
CBO Baseline Deficit	201	211	227	247	268	1,152
Oil Prices $4 Lower	195	201	213	229	246	1,086
Oil Prices $6 Lower	194	197	209	222	236	1,059
Oil Prices $8 Lower	194	194	203	211	222	1,023

* Less than $500 million.

STATEMENT OF MR. WILLIAM BRADFORD, SENIOR VICE PRESIDENT FOR OPERATIONS, DRESSER INDUSTRIES, HOUSTON, TX

Mr. BRADFORD. Thank you, Mr. Chairman.

In addition to my responsibility at Dresser, I also serve as the elected First Vice President of the Petroleum Equipment Suppliers Association. Today I am also speaking on behalf of the Association of Oil Well Servicing Contractors, the International Association of Drilling Contractors, the International Association of Geophysical Contractors, and the National Ocean Industries Association. Together, we represent some 250,000 employees and over 2,200 firms.

There are some key issues that I believe are vitally important to our nation that I would like to draw your attention to.

First, the oil field services and supply industry is a critical component of the domestic exploration and production industry. We would like to emphasize that it is a separate part of the oil industry and one that supports the domestic oil and gas producers.

Secondly, this segment of the industry is in a very fragile condition and has experienced a serious contraction during the past several years.

Thirdly, in our opinion this contraction will have serious implications for the supply capability of the oil and gas industry both in the United States and worldwide.

I would like to make some observations about what has happened in the oil industry in recent months. As you have seen and so succinctly noted, exploration and production activity in the United States has declined by more than 50 percent since the beginning of 1986. You have commented, many witnesses have commented, on the decline in the rig count. I would just point out that since the beginning of this year, since January 1st, that rig count is falling at the rate of 40 to 50 rigs per week and now stands below 850 rigs.

Other indicators of industry activity have suffered the same experience—the number of well servicing rigs which are operating in the country, the number of seismic crews which are operating. I would point out that the number of seismic crews operating this week are at the lowest level experienced since 1934.

Senator BOREN. Do you have those figures before you?

Mr. BRADFORD. Those figures I have with me; they are also in the written testimony.

Senator BOREN. I would appreciate it if you would enter those figures on the seismic operation and on the service rigs also into the record, because I think what is happening to the service sector is extremely important.

Mr. BRADFORD. Thank you, and we shall do that.

[The figures follow:]

WELL SERVICING RIG COUNTS

YEAR----------1986

FORMAT:MON. -RIGS AVAILABLE
-RIGS WORKING
-PERCENT WORKING

MONTH	WESTERN	ROCKY MOUNTAINS	EASTERN	MID CONTINENT	WEST TEXAS	TEXAS GULF COAST	SOUTH LOUISIANA	ALL U.S. AREAS
JANUARY	712	860	1673	1798	1867	873	232	8015
	484	480	820	1091	1176	468	130	4649
	68%	56%	49%	61%	63%	54%	56%	58%
FEBRUARY	712	860	1673	1798	1867	873	232	8015
	498	447	775	1061	1147	459	120	4498
	70%	52%	46%	59%	61%	53%	52%	56%
MARCH	712	860	1673	1798	1867	873	232	8015
	396	343	500	815	896	400	100	3450
	56%	40%	30%	45%	48%	46%	43%	43%
APRIL	712	860	1673	1798	1841	873	232	7989
	320	310	500	647	686	384	95	2942
	45%	36%	30%	36%	37%	44%	41%	37%
MAY	712	860	1673	1798	1801	873	232	7949
	284	268	460	643	662	316	100	2733
	40%	31%	27%	36%	37%	36%	43%	34%
JUNE	712	860	1673	1798	1801	873	232	7949
	249	277	450	611	657	300	100	2644
	35%	32%	27%	34%	36%	34%	43%	33%
JULY	712	860	1673	1798	1801	873	232	7949
	249	275	460	638	639	300	95	2656
	35%	32%	27%	35%	35%	34%	41%	33%
AUGUST	712	860	1673	1798	1801	873	232	7949
	250	318	450	611	624	260	85	2598
	35%	37%	27%	34%	35%	30%	37%	33%
SEPTEMBER	712	860	1673	1798	1791	873	232	7939
	250	275	450	629	528	260	85	2477
	35%	32%	27%	35%	29%	30%	37%	31%
OCTOBER	712	860	1673	1798	1761	873	232	7909
	250	277	450	570	576	260	85	2468
	35%	32%	27%	32%	33%	30%	37%	31%
NOVEMBER	712	860	1673	1798	1761	873	232	7909
	250	275	468	629	616	260	84	2582
	35%	32%	28%	35%	35%	30%	36%	33%
DECEMBER	712	860	1673	1798	1761	873	232	7909
	250	284	600	629	651	250	80	2744
	35%	33%	36%	35%	37%	29%	34%	35%
YEAR AVERAGE	44%	37%	32%	40%	41%	37%	42%	38%

WELL SERVICING RIG COUNTS

YEAR----------1985

FORMAT:MON. -RIGS AVAILABLE
-RIGS WORKING
-PERCENT WORKING

MONTH	WESTERN	ROCKY MOUNTAINS	EASTERN	MID CONTINENT	WEST TEXAS	TEXAS GULF COAST	SOUTH LOUISIANA	ALL U.S. AREAS
JANUARY	657	876	1506	1808	1934	946	280	8007
	400	484	934	1202	1276	473	150	4919
	61%	55%	62%	66%	66%	50%	54%	61%
FEBRUARY	657	876	1506	1808	1934	946	280	8007
	412	474	885	1166	1296	480	143	4856
	63%	54%	59%	64%	67%	51%	51%	61%
MARCH	657	876	1506	1808	1902	946	280	7975
	433	455	626	1171	1266	530	145	4626
	66%	52%	42%	65%	67%	56%	52%	58%
APRIL	657	876	1506	1808	1902	946	280	7975
	433	420	638	1112	1250	540	145	4538
	66%	48%	42%	62%	66%	57%	52%	57%
MAY	657	876	1506	1808	1902	946	280	7975
	433	420	854	1044	1179	580	145	4655
	66%	48%	57%	58%	62%	61%	52%	58%
JUNE	657	876	1506	1808	1902	946	280	7975
	423	446	949	1003	1122	580	150	4673
	64%	51%	63%	55%	59%	61%	54%	59%
JULY	657	876	1506	1808	1902	946	280	7975
	450	420	912	1012	1094	563	165	4616
	68%	48%	61%	56%	58%	60%	59%	58%
AUGUST	712	860	1673	1798	1900	873	232	8048
	498	447	1071	1031	1135	535	128	4845
	70%	52%	64%	57%	60%	61%	55%	60%
SEPTEMBER	712	860	1673	1798	1900	873	232	8048
	498	464	1005	1052	1154	500	135	4808
	70%	54%	60%	59%	61%	57%	58%	60%
OCTOBER	712	860	1673	1798	1906	873	232	8054
	484	451	1005	1030	1124	500	135	4729
	68%	52%	60%	57%	59%	57%	58%	59%
NOVEMBER	712	860	1673	1798	1868	873	232	8016
	484	473	980	980	1168	510	150	4745
	68%	55%	59%	55%	63%	58%	65%	59%
DECEMBER	712	860	1673	1798	1877	873	232	8025
	484	476	848	1013	1164	455	142	4582
	68%	55%	51%	56%	62%	52%	61%	57%
YEAR AVERAGE	67%	52%	57%	59%	62%	57%	56%	59%

WELL SERVICING RIG COUNTS

YEAR ——— [illegible]

LEGEND: RIGS AVAILABLE
RIGS WORKING
PERCENT WORKING

MONTH	[illegible]	ROCKY MOUNTAINS	[illegible]	MID CONTINENT	WEST TEXAS	TEXAS GULF COAST	[illegible]	ALL U.S. AREAS
January	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
February	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
March	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
April	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
May	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
June	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
July	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
August	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
September	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
October	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
November	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
December	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
YEAR AVG.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

WELL SERVICING RIG COUNTS -RIGS AVAILABLE
FORMAT:MON. -RIGS WORKING
YEAR--------1983 -RIG UTILIZATION

MONTH	WESTERN	ROCKY MOUNTAINS	EASTERN	MID CONTINENT	WEST TEXAS	TEXAS GULF COAST	SOUTH LOUISIANA	ALL U.S. AREAS
	612	993	1313	1780	1822	947	343	7810
JANUARY	337	467	604	890	911	423	154	3786
	55	47	46	50	50	44	44	48
	612	993	1313	1780	1867	947	343	7855
FEBRUARY	367	422	558	801	899	427	155	3629
	59	42	42	45	48	45	45	46
	616	993	1313	1784	1867	927	343	7843
MARCH	320	397	551	821	877	417	154	3537
	51	39	41	46	46	44	44	45
	616	993	1316	1788	1901	924	343	7881
APRIL	320	357	551	796	846	398	145	3413
	51	35	41	44	44	43	42	43
	616	993	1316	1788	1902	924	343	7882
MAY	340	364	553	755	799	388	141	3340
	55	36	42	42	42	41	41	42
	616	993	1316	1788	1910	924	343	7890
JUNE	339	377	592	715	764	381	145	3313
	55	37	44	39	40	41	42	41
	616	993	1316	1788	1911	924	343	7891
JULY	357	407	639	729	788	370	141	3431
	57	40	48	40	41	40	41	43
	616	993	1304	1788	1901	924	343	7869
AUGUST	401	462	756	769	855	462	163	3868
	65	46	57	43	44	50	47	49
	616	993	1304	1788	1891	924	343	7859
SEPTEMBER	431	397	756	791	863	517	172	3927
	69	39	57	44	45	55	50	49
	616	993	1304	1788	1884	924	343	7852
OCTOBER	333	516	746	849	895	513	172	4024
	54	51	57	47	47	55	50	51
	616	993	1304	1788	1881	924	343	7849
NOVEMBER	370	536	795	894	941	554	172	4262
	60	53	60	50	50	59	50	54
	616	993	1304	1788	1881	924	343	7849
DECEMBER	420	497	822	894	940	527	175	4255
	68	50	63	50	49	57	51	54
YEAR AVERAGE	58	41	50	45	46	48	46	47

WELL SERVICING RIG COUNTS

YEAR--------1982

FORMAT:MON. -RIGS AVAILABLE
-RIGS WORKING
-RIG UTILIZATION

MONTH	WESTERN	ROCKY MOUNTAINS	EASTERN	MID CONTINENT	WEST TEXAS	TEXAS GULF COAST	SOUTH LOUISIANA	ALL U.S. AREAS
JANUARY	586	865	923	1303	1570	844	276	6367
	469	649	735	1189	1413	703	210	5368
	80	75	79	91	90	83	76	84
FEBRUARY	586	865	940	1309	1570	844	276	6390
	454	692	653	1145	1374	684	218	5220
	77	80	69	87	87	81	78	81
MARCH	586	865	940	1309	1579	844	298	6421
	410	623	639	1075	1184	655	222	4808
	69	72	67	82	74	77	74	74
APRIL	586	865	940	1309	1579	844	298	6421
	404	519	564	942	1153	549	203	4334
	68	60	60	71	73	65	68	67
MAY	594	865	940	1320	1621	844	308	6492
	453	520	573	900	1106	568	208	4328
	76	60	60	68	68	67	67	66
JUNE	604	865	940	1320	1667	844	307	6547
	389	523	611	797	956	538	191	4005
	64	60	65	60	57	63	62	61
JULY	604	865	940	1329	1667	844	309	6558
	355	476	446	834	1063	502	170	3846
	58	55	47	62	63	59	55	58
AUGUST	607	865	940	1329	1676	898	314	6629
	347	450	444	801	1022	538	177	3779
	57	52	47	60	60	59	56	57
SEPTEMBER	607	865	940	1329	1698	898	315	6652
	334	467	440	748	1058	527	152	3726
	55	53	46	56	62	58	48	56
OCTOBER	603	865	940	1329	1680	898	344	6659
	332	441	470	730	1108	517	164	3762
	55	50	50	54	65	57	47	56
NOVEMBER ***	612	993	1303	1784	1803	977	343	7815
	337	477	638	892	932	489	168	3933
	55	48	48	50	51	50	48	50
DECEMBER	612	993	1313	1784	1822	947	343	7814
	336	457	670	892	911	445	154	3865
	54	46	51	50	50	46	44	49
YEAR AVERAGE	64	59	57	66	67	64	60	63

*** GUIBERSON RIG CENSUS COMPLETED.

WELL SERVICING RIG COUNTS

FORMAT:MON. -RIGS AVAILABLE
-RIGS WORKING
-RIG UTILIZATION

YEAR--------1981

MONTH	WESTERN	ROCKY MOUNTAINS	EASTERN	MID CONTINENT	WEST TEXAS	TEXAS GULF COAST	SOUTH LOUISIANA	ALL U.S. AREAS
JANUARY	408	626	612	1005	1342	719	271	4983
	347	520	490	834	1208	561	249	4209
	85	83	80	82	90	78	91	84
FEBRUARY	408	626	612	1005	1342	719	271	4983
	347	520	508	925	1235	575	249	4359
	85	83	83	92	92	79	91	87
MARCH	408	626	612	1005	1342	719	271	4983
	347	532	428	884	1235	568	244	4238
	85	84	69	87	92	78	90	85
APRIL	425	626	746	1005	1311	719	265	5097
	345	520	586	955	1206	579	239	4430
	81	83	78	95	91	80	90	86
MAY	515	651	830	1025	1311	810	265	5407
	458	553	704	961	1209	626	238	4749
	88	84	84	93	92	77	89	87
JUNE	519	751	898	1259	1366	811	274	5878
	448	627	759	1177	1257	586	239	5093
	86	83	84	93	92	72	87	86
JULY	519	822	898	1259	1380	811	295	5984
	432	691	674	1200	1270	646	259	5172
	83	84	75	95	92	79	87	86
AUGUST	535	822	898	1208	1406	812	291	5972
	423	682	763	1133	1297	637	261	5196
	79	82	84	93	92	78	89	87
SEPTEMBER	535	822	898	1208	1406	812	291	5972
	402	688	741	1148	1282	644	259	5164
	75	83	82	95	91	79	89	86
OCTOBER	547	824	898	1211	1437	812	276	6005
	410	692	763	1114	1243	674	246	5142
	74	83	84	91	86	83	89	85
NOVEMBER	552	824	898	1211	1437	812	271	6005
	439	692	774	1081	1274	664	241	5165
	79	83	86	89	88	81	88	86
DECEMBER	552	824	898	1211	1551	812	276	6124
	442	692	758	1091	1396	658	242	5279
	80	83	84	90	90	81	87	86
YEAR AVERAGE	82	83	81	91	91	79	89	86

Mr. **Bradford**. In addition to those, oil field employment in the service and supply segment of the industry has fallen by 500,000 jobs since March of 1982, and fallen by 130,000 jobs in the last 12 months alone.

In addition, as you are aware, scores of oil field service companies are simply gone, and those that remain have had to drastically reduce their capacities in order simply to survive.

There is some recent data that just came out at the end of last week from the Simmons and Company, which is a financial consulting group headquartered in Houston, that points our the financial fragility of this industry. There were 110 companies in this survey; only 18 of those 110 companies were in a positive earnings position, and in almost every case of those 18 the positive earnings could be traced to non-oil-field activity.

The total operational losses for those companies was in excess of $5 billion in the last 12 months. Many of the companies are in negative cash flow, and of the total cash flows for the sample, 42 percent of the cash flow accrued to one company alone. The stockholders' equities in those 110 companies was slightly in excess of $12 billion. The total debt burden for the survey was in excess of $11 billion, and there is just over $1.5 billion in operational cash flow available to service that debt and other corporate needs.

Senator **Boren**. So, what you are saying is that vast additional segments of this particular industry will be unable to survive unless the economic picture turns around rather dramatically?

Mr. **Bradford**. Yes, Mr. Chairman. And the point is—not to belabor these catastrophic sorts of things—the point is that the entire industry, the infrastructure of the industry, has already been radically changed. Indeed, the capacity has been halved. What this means, I think, to the country, to America, is that our ability to respond to any new energy policy, any new disruption, is going to be radically changed. It has already been changed.

We talked broadly this morning about the decline in our production in the country and the increase in imports. I would just remind you that 65 percent of all of the world's oil reserves lay in the OPEC nations within OPEC. It is my information that 90 percent of the excess capacity, production capacity, in the world lies in the Gulf States, the nations within OPEC.

I would propose that this type of imbalance must have strong, severe, long-term strategic implications for this country, both economic and in national security.

I would like to quickly summarize our position on the issues that now face you, Mr. Chairman. We congratulate you on the measures you have introduced which would aid the industry. The tax incentives to stimulate the exploration and maintain production we are in total support of. The repeal of the windfall profits tax is strongly supported by all of these organizations. The import fee is strongly supported by all the organizations I represent with the exception of the National Ocean Industries Association. NOIA has no position on the fee but is actively considering such a move.

In addition, you will find several other proposals contained within my written statement that we would like you to give consideration to.

I think the real question before the Congress, before all of the country, is: Will the oil field industry emerge from the 1980's and be prepared to face the country's economic and security questions in the 1990's?

That concludes my statement, Mr. Chairman, and we certainly thank you for the opportunity to present our views here today.

Senator BOREN. Thank you very much, Mr. Bradford. I think your comments, again, are particularly relevant to our ability from a national security point of view to respond to changing conditions in the future. And there are so many people in the country who believe that we can, in essence, rachet down the level of domestic production and then rachet it back up very rapidly if economic conditions or national security conditions change and require it.

Certainly, of key importance to our ability to sustain production or to respond to any need to rapidly increase levels of production on an emergency basis are very much related to the health of the service industries that you have discussed. And I hope my colleagues will take the time to read your full testimony, because I think there are so many who seem to feel, "Well, we will drain the rest of the world now, and we will rachet up our domestic production very rapidly if we have an emergency situation." They should very carefully ponder the picture that you have painted.

Our next witness is Mr. Jack Taylor, who is here representing the American Association of Petroleum Geologists. Mr. Taylor is from Oklahoma City, and during the time that I served as Governor he was one of my official and unofficial energy advisors. I have often said that whatever positions I have taken on energy policy matters, you can either give Mr. Taylor a good healthy part of the blame or the credit, depending on your point of view. But I have found him to be a person of great knowledge and credibility and integrity in presenting his point of view.

Jack, we are delighted to have you with us here this morning, representing the American Association of Petroleum Geologists.

[Mr. Bradford's written prepared testimony follows:]

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Statement of

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On Behalf of

The Petroleum Equipment Suppliers Association

The Association of Oilwell Servicing Contractors

The International Association of Drilling Contractors

The International Association of Geophysical Contractors

The National Ocean Industries Association

Before the

Subcommittee on Energy Growth and Agricultural Taxation

of the

Finance Committee

U.S. Senate

January 30, 1987

Mr. Chairman, my name is William E. Bradford. I am Senior Vice President - Operations for Dresser Industries located in Dallas, Texas. I also serve as the elected First Vice President of the Petroleum Equipment Suppliers Association.

Founded in 1933, PESA's 210 member companies comprise some 90% of the manufacturers of tools and equipment used in the exploration for and drilling and production of oil and natural gas, service companies supplying specialized support for oilfield operations and supply companies acting as industrial equipment outlets for oil and gas operations.

Today, I am also speaking on behalf of the Association of Oilwell Servicing Contractors (AOSC), the International Association of Drilling Contractors (IADC), the International Association of Geophysical Contractors (IAGC), and the National Ocean Industries Association (NOIA). Attached to my statement is a description of each of these sister associations. Together, we represent some 250,000 employees and 2,200 firms ranging from the Fortune 500 Companies to small individual entrepreneurs, throughout the country.

While some casual observers may think that the general condition of the oilfield service and supply industry is improving, speaking as a front-line trooper in the fight for industry survival, I can assure the members of this Subcommittee that conditions are not improving and that we are experiencing only a brief respite in the ongoing disintegration of the U.S. oilfield service industry.

The wide swings in the price of crude oil which the industry has recently experienced constitute a major threat to the survival of the domestic U.S. oilfield service industry. The price of West Texas Intermediate on the U.S. spot market dropped from a high of approximately $36.00 in 1981 to $25.20 in December, 1985. It then plunged to a low of $10.40 on March 9, 1986. The price last week was $18.72.

Drilling activity cannot be expected to increase unless there is some reasonable expectation of what the return on investment will be. Under present conditions planning is difficult, if not impossible. Until some stability is achieved in the price of oil, the long-term prospects for the oilfield service industry will remain a question.

Our industries have been in a recession since 1981, but it was not until 12 months ago that we recognized it as a two-stage recession; the second stage being a depression for many of us. The period from 1981 to 1985 was one of significant contraction for the industry. The rig count dropped from a peak of 4,530 to 1,950 (a 57% reduction) in 4 1/2 years. Our member companies were adjusting with difficulty to the harsh new market when the first six months of 1986 saw an unprecedented further collapse with the rig count falling to 663 on July 14th.

Other industry indicators which reveal the depth of our problem include:

* The number of well service rigs (i.e., rigs used to maintain producing wells) dropped from 5,280 in 1981 in 2,500 in 1986.

* The number of seismic (geophysical) crews, land and marine, doing preliminary exploration in the U.S. fell from 744 in September, 1981 to 157 in December, 1986. The latter figure has not been experienced since 1934.

* In March, 1982, total oilfield employment in manufacturing and services reached 619,000. In December, 1985, it was 377,400. In November, 1986, it had reached 247,500. (Source: U.S. Bureau of Labor Statistics.)

Numbers alone tell only part of the story. A substantial portion of the workforce consists of highly trained professionals. The profesionals who have been laid off, have, in many cases, left the industry. Experience has shown that they are unlikely to come back, when the market does eventually turn around. Trained professionals will be needed to replace those we have lost. If we have to start at the college graduate level, it is estimated that it could take over three years to train a graduate engineer to operate in the field at 90% efficiency.

To young people seeking a career the message is clear: Do not look in the Oil Patch. The situation at Texas A & M Department of Petroleum Engineering is representative of the problem that is developing. In 1982, the student body of the department was 1,700. In 1986, the student body was 450. Of this number, a disproportionately large group were seniors.

Skeptics who believe that we are crying wolf point out that our industries have always responded to price signals in times past. This is true, but in the past, prices drifted higher or lower over a period of several years. Never, Mr. Chairman, have our industries experienced a price collapse of such magnitude as in the first six months of 1986. Scores of oilfield service companies are simply gone. Those that remain have had to drastically reduce capacity and employment in order to survive.

To graphically illustrate this point, I hold in my right hand the 1983-84 PESA Service Point Directory carrying the names and addresses of some 314 member companies and the locations of their operations (131 pages). In my left hand is the 1986-87 PESA Membership Directory (42 pages), which lists 210 members. We did not attempt to include service points because their number has been halved and more are closing each day. Many of the companies listed in the 1987 publication have either merged or filed bankruptcy since the book was printed. The same degree of attrition has taken place within the four other trade associations in whose behalf I am appearing today.

The pressure on oilfield service companies has been unrelenting. According to the Value Line Investment Survey (Chart Attached) composite earnings for a group of 26 oilfield companies was over $4 billion in 1981. In 1985, net profits fell to $285 million, and in 1986, the same companies are estimated to have lost $1.1. billion.

To give some measure of the breadth of the energy industry depression, PESA asked the firm of Simmons & Company International to break out earnings data by sector. The data on the attached charts show clearly that even established firms are experiencing severe losses in every sector of the industry, save production-related service companies who serve existing wells and other downstream activities.

These firms already have $11 billion in accumulated debt. It is difficult to see how these firms can service such a large burden in light of substantially reduced or negative cash flows.

In sum, Mr. Chairman, the oilfield service infrastructure has been radically altered, and our ability to respond to an increase in domestic drilling is limited. Should the price of oil rise sharply, it may be impossible to respond to a major increase in activity in a timely and effective manner. Our response to changing price signals will not be the same because the industry itself is not the same.

The decline in oilfield activity also holds important implications for the country's crude production and the outlook for its future supply capability. In December 1986, domestic output fell 700,000 barrels per day (an 8% reduction) from the prior year. Crude oil imports, on the other hand, have increased dramatically, particularly from Arab members of OPEC.

These events reverse an eight-year trend of declining dependence on foreign oil supplies. In 1986, the U.S. imported about 37% of its total oil needs, compared with 32% in 1985. Oil industry observers suggest that the U.S. could be importing half of its oil requirements by as early as 1990 if prices remain below $20 per barrel, and the country's dependence on imports could reach or exceed the peak level of dependence that existed in the 1970's.

This imbalance in U. S. oil markets has several implications for the U.S. as a whole. Higher import volumes further deteriorate the nation's balance-of-payment position and heighten the costs of any disruption to the flow of internationally-traded oil. Import dependence may also have indirect costs to the nation's political security, including a loss of flexibility in U.S. foreign policy initiatives, a strenthening of the position of oil-exporting nations not allied with the U.S., and an increased likelihood of U.S. involvement in armed conflict to preserve access to crude supplies. While these costs are not readily quantified, they could well be the most important costs imposed by increased U.S. dependence on imported oil.

POTENTIAL SOLUTIONS

There are a number of policy initiatives that are now before you introduced to address these issues and help to shape the energy environment in which the U.S. will participate. Because the problems are complex, we recognize that the solutions must also be multifaceted, addressing both incentives to encourage the long-term development of domestic reserves and to affect growth in the country's oil demand.

Those proposals which fall within the Subcommittee's jurisdiction are as follows:

Impose an Import Fee or Tariff on Oil and Petroleum Products

Mr. Chairman, we congratulate you on introducing S.302, which would impose a variable import fee on imported crude oil and petroleum products with an $18 barrel trigger. Without such a fee, imports will continue to rise with the net result that both proven reserves and domestic production capacity will continue to drop. This could place in severe jeopardy our ability to respond adequately to either a national defense emergency, which would increase demand, or to a disruption of foreign imports for whatever reason. With no contingency in sight, except the limited supplies stored in the SPR, this should be a major national security concern. When prices begin to escalate in earnest, the impact on the balance of payments and the economy at large would indeed be severe. We believe that an import fee could be keyed to a specific oil price, such as you suggest, and phased out as prices rise above this target "floor". In addition, the enabling legislation or directive should be without exceptions and have a sunset provision ending any import fee tariff on a specific date.

Mr. Chairman, all of the associations I speak for, with the exception of the National Ocean Industries Association, support an import fee. NOIA has taken no position but is actively considering such a move.

Tax Incentives to Improve Cash Flow and Attract Investment

Under present market conditions, there is great pressure on our customers' cash flow. This pressure has been increased by current tax law. Repeal of the 50% of net income limitation for the depletion deduction and increasing the rate of the depletion deduction as provided in S.1220 would ease this pressure and help encourage drilling. Expensing of geological and geophysical costs and repealing the IDC recapture rule, also included in S.1220, would also be important help.

In 1985, an estimated 452,000 stripper wells provided about 15% of the nation's domestic oil output, representing an important source of new production during the early 1980's.

While a current inventory of stripper wells is not available, it is estimated that a large number of these wells have been shut-in in the past year, contributing significantly to the loss in U.S. production. We believe that this incremental source should be protected to ensure its future availability, including an increase in percentage depletion rates to increase cash flow to eligible producers and the extension of depletion allowances to integrated producers with stripper or tertiary production.

Repeal of the Windfall Profits Tax (WPT)

We agree with you, Mr. Chairman, that the time has come to repeal WPT. WPT does not currently generate any federal revenue, but does create an expensive administrative burden on both industry and government. The real problem we have is that it acts as a disincentive to investment since it would discourage drilling when prices begin to rise again. The associations I represent strongly endorse S.1391, which you have introduced to accomplish this objective.

Incentives for Hostile Area Exploration

Legislation has been proposed to establish a tax credit of up to 15% for exploration conducted north of the 49th parallel and in offshore waters deeper than 600 feet. For new production, the proposal calls for a credit of $5 per barrel of oil equivalent. The amounts of both credits will be reduced for the intermediate water depths between 1,200 and 600 feet and for oil prices between $22 and $30 per barrel, adjusted for inflation.

Other proposals which are not part of the Subcommittee's jurisdiction, but which would be important to our industry, include:

Repeal of the Fuel Use Act and Incremental Pricing

Efforts to achieve either or both of these objectives have been thwarted because of opposition from the coal industry and reluctance to consider them independently of other issues such as transportation and take-or-pay. We believe that a good-faith effort on all sides can achieve results. There is unanimous support among our five associations for this measure.

Improve Access to Federal Public Lands

Two of the most promising sites for domestic oil and gas exploration and development lie on federal public land. One is the Coastal Plain of the Arctic National Wildlife Refuge (ANWR) in Northern Alaska, the other is Offshore California. Both these areas have the potential for adding major new domestic oil reserves to the U.S. inventory. Operating experience has shown that industry can act responsibly to serve the nation's energy requirements and maintain the ecological integrity of the area.

This measure is also fully supported by our five associations

CONCLUSION

Mr. Chairman, none of these proposals will completely solve the serious problems that face our industry. Each, however, could contribute to a greater or lesser degree to an improved climate for our operations. The question is: Will our domestic industries that emerge from the 1980's be prepared to help meet the country's economic and security challenges of the 1990's? Your committee, by adopting our suggestions, could go a long way toward assuring that they are.

This concludes my statement, Mr. Chairman. We appreciate the opportunity to present our views today. I will be happy to answer any questions that the Committee may have.

PETROLEUM EQUIPMENT SUPPLIERS ASSOCIATION

Founded in 1933, PESA is comprised of 210 member companies in the oilfield equipment, service, and supply industries ranging from "Fortune 500" enterprises to individual entrepreneurs. PESA member companies operate in 46 states and 75 countries with combined 1986 sales estimated at $10 billion.

NATIONAL OCEAN INDUSTRIES ASSOCIATION

The National Ocean Industries Association (NOIA) is a trade association founded in 1972 and is comprised of over 350 member companies. This figure is down from over 430 members, just one year ago. NOIA represents a wide array of interests involved in all aspects of exploration and development of the nation's offshore petroleum resources. The membership includes, among others, drilling contractors, equipment manufacturers and suppliers, geophysical contractors, oil and gas producers, air and marine transportation firms, engineering and construction companies, service comanies and steel companies. Member companies are headquartered in 34 states and have operations in all 50 states.

INTERNATIONAL ASSOCIATION OF DRILLING CONTRACTORS

Founded in 1941, IADC currently has 1,366 member companies, including oil and gas well drilling contractors, service/supply/manufacturing firms, and producing oil and gas companies.

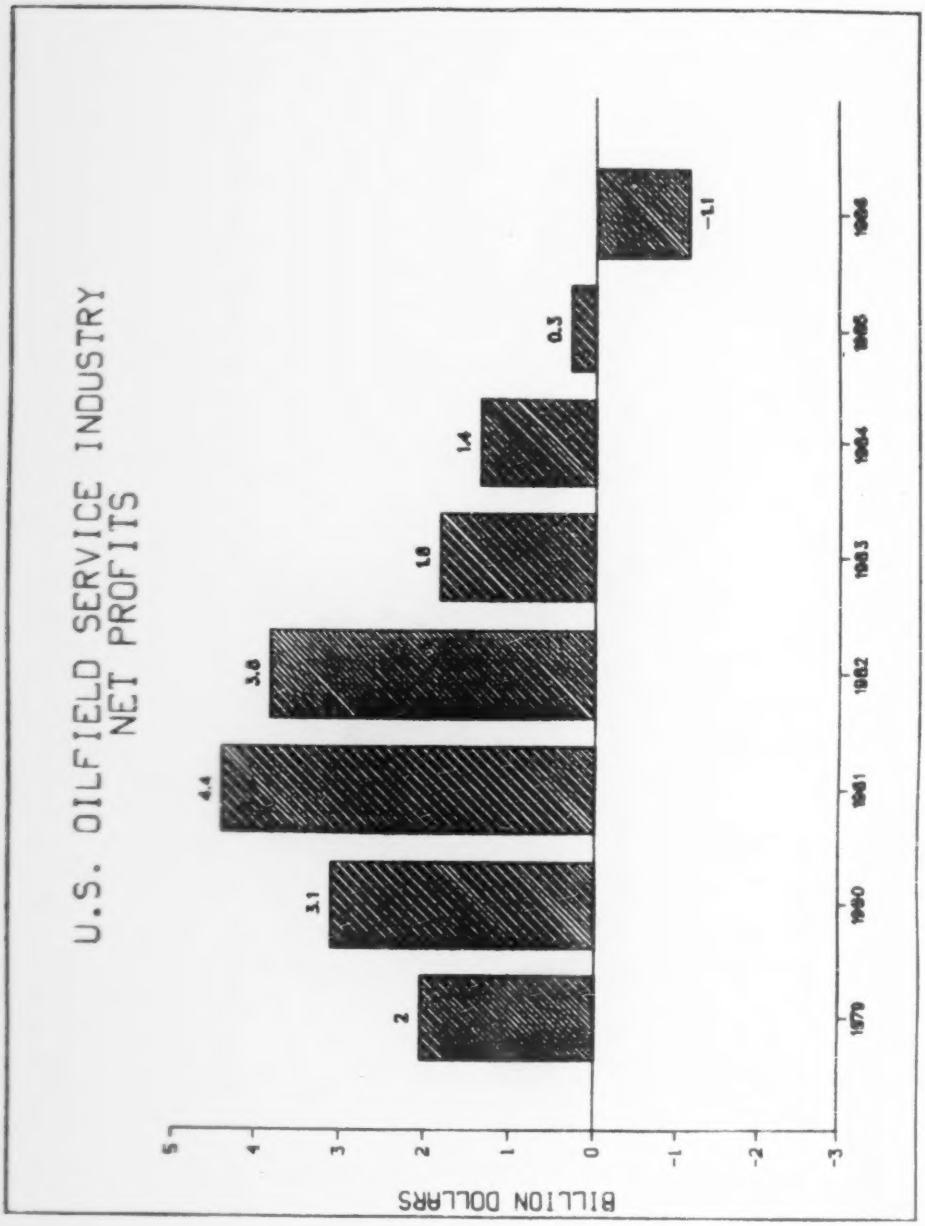
Membership is virtually world-wide and includes more than 90% of the world's contract-drilling rigs. IADC has consultative status with the UN's International Maritime Organization, London.

ASSOCIATION OF OILWELL SERVICING CONTRACTORS

The Association of Oilwell Servicing Contractors is the service organization to the oil industry. It's job is to service and maintain production from the nation's source of 850,000 oil and gas wells. The AOSC is composed of some 700 member companies across the U.S. which represent about 4,000 well service rigs and associated suppliers and manufacturers to the industry.

INTERNATIONAL ASSOCIATION OF GEOPHYSICAL CONTRACTORS

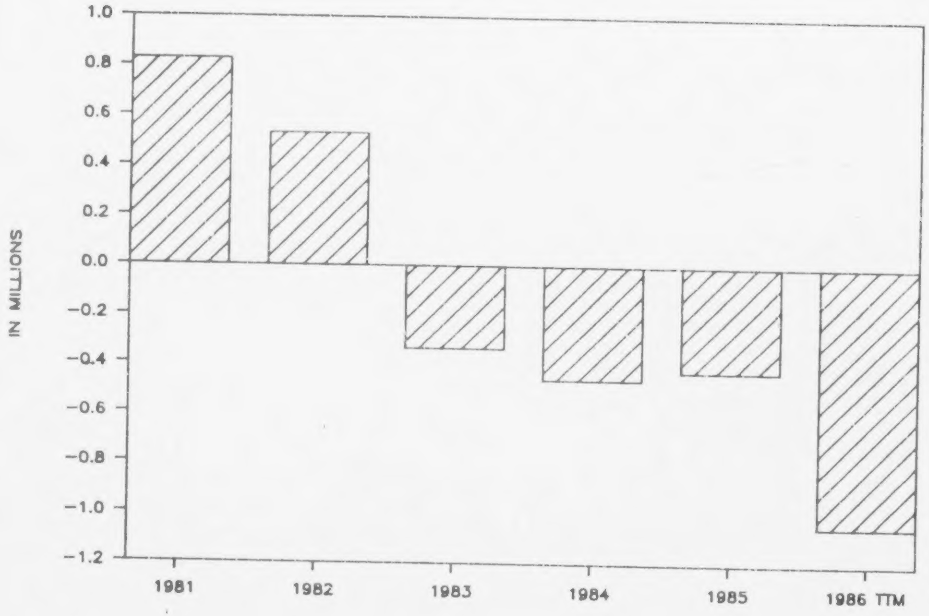
Founded in 1971, IAGC is the trade association which represents the independent service companies and gephysical departments of integrated oil companies which do virtually all of the geophysical data acquisition, processing and interpretation -- primarily utilizing the seismic method -- in search of new crude oil and natural gas supplies in the free world. Geophysical data processing centers, data brokerage and exchange companies, geophysical consulting firms, and geophysical equipment manufacturers and suppliers also are members of the association. Total geophysical data acquisition and processing expenditures in 1985 -- the latest figures available -- totaled approximately $3.5 billion.



U.S. OILFIELD SERVICE INDUSTRY
NET PROFITS

SIMMONS & COMPANY INTERNATIONAL
Oil Service Statistics
Aggregate Net Income

DRILLING EQUIPMENT SECTOR



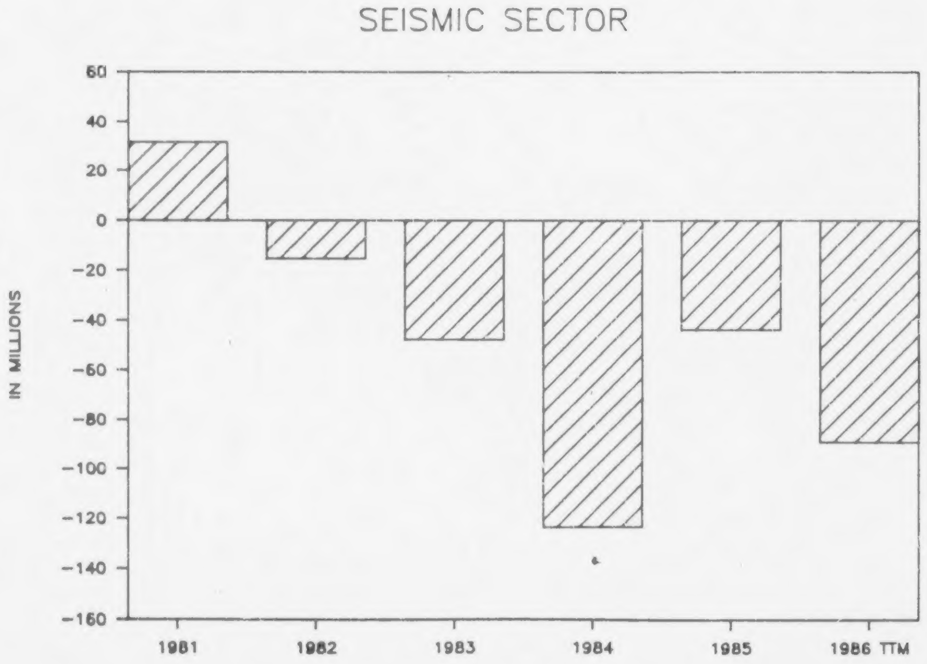
Drilling Equipment Manufacturers

Aztec Manufacturing
Barton Valve
Cameron Iron Works
Galveston Houston
Hughes Tool
Lone Star Technologies
Smith International
Varco International
Weatherford International

SIMMONS & COMPANY INTERNATIONAL

Oil Service Statistics

Aggregate Net Income

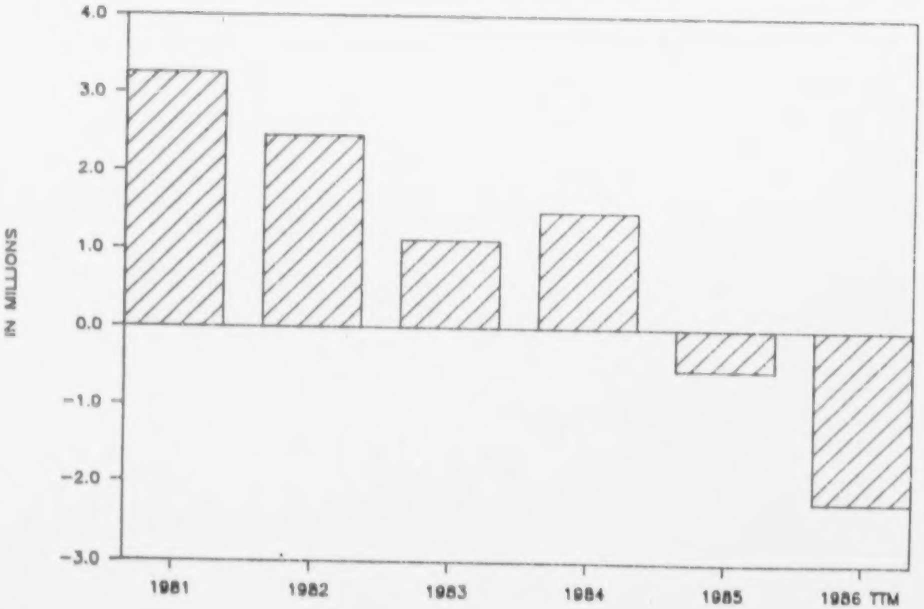


Seismic Sector

Dawson Geophysical
Digicon Inc
Geophysical Systems
GTS Corp
Scientific Software
Seis Pros
Seiscom Delta
Seisdata Services

SIMMONS & COMPANY INTERNATIONAL
Oil Service Statistics
Aggregate Net Income

DIVERSIFIED SERVICES

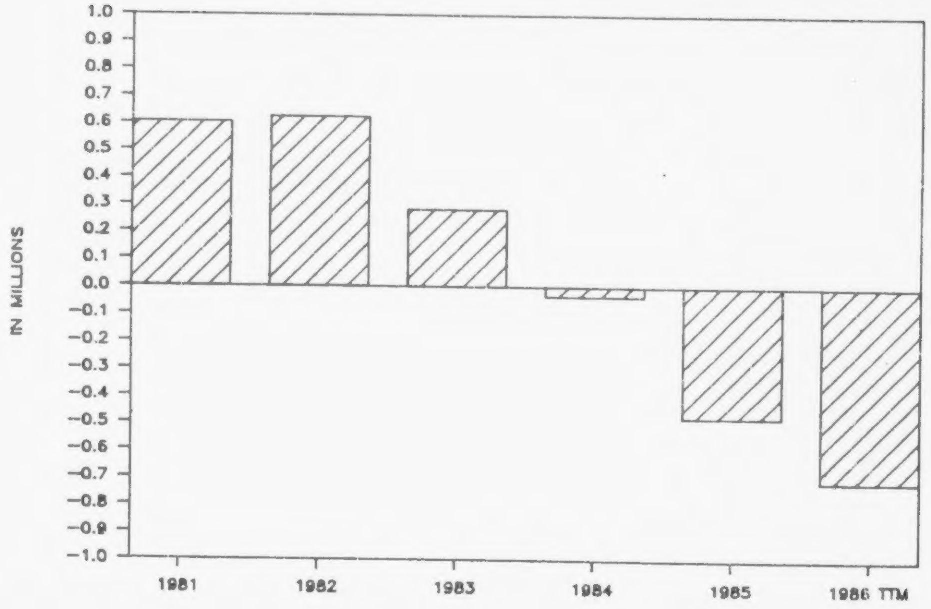


Diversified Services

Baker International
Bralorne Resources
Dresser Industries
Gearhart Industries
Geo International
Halliburton Co
McDermott International
Newpark Resources
NL Industries
Pengo Industries
Schlumberger Ltd
Summit Oilfield Corp
Western Co of North America

SIMMONS & COMPANY INTERNATIONAL
Oil Service Statistics
Aggregate Net Income

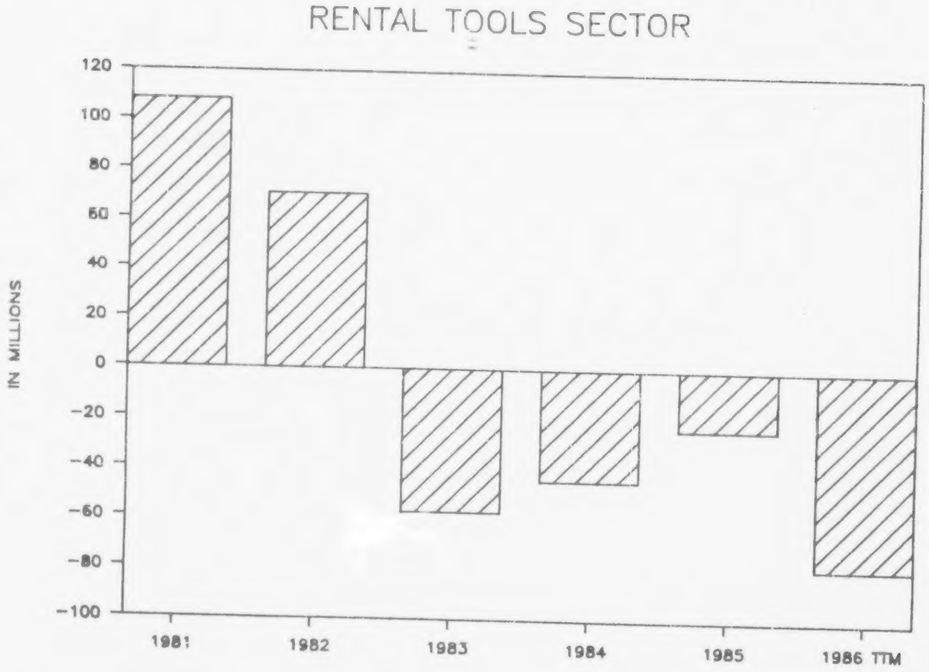
OFFSHORE DRILLING SECTOR



Offshore Drilling

Atwood Oceanics
Global Marine
Noble Drilling
ODECO
Rowan Companies
Reading & Bates
Zapata Corp

SIMMONS & COMPANY INTERNATIONAL
Oil Service Statistics
Aggregate Net Income



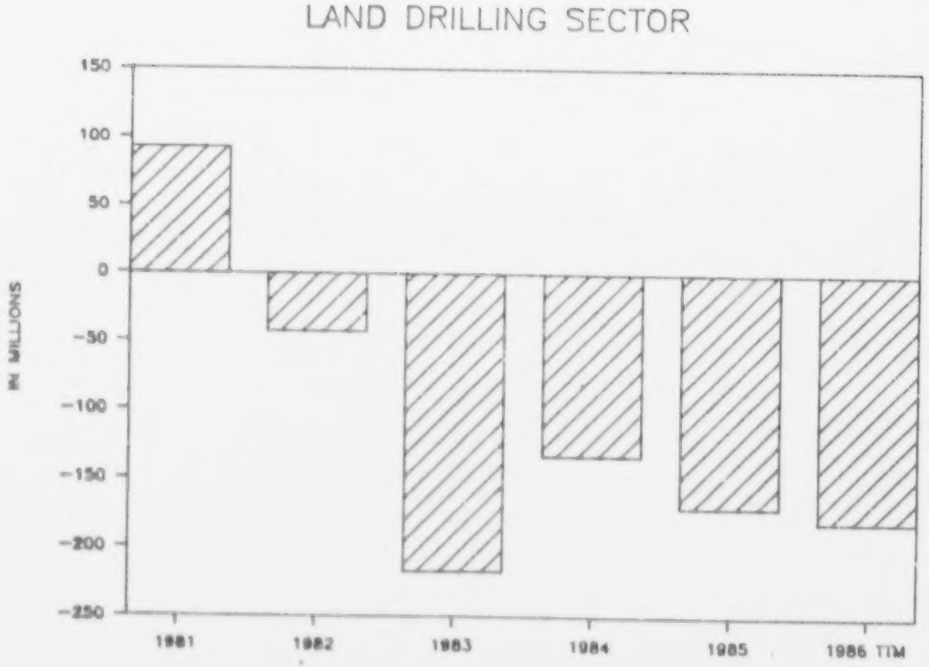
Rental Tools

Enterra Corp
H & H Oil Tool
PETCO
RPC Energy

SIMMONS & COMPANY INTERNATIONAL

Oil Service Statistics

Aggregate Net Income

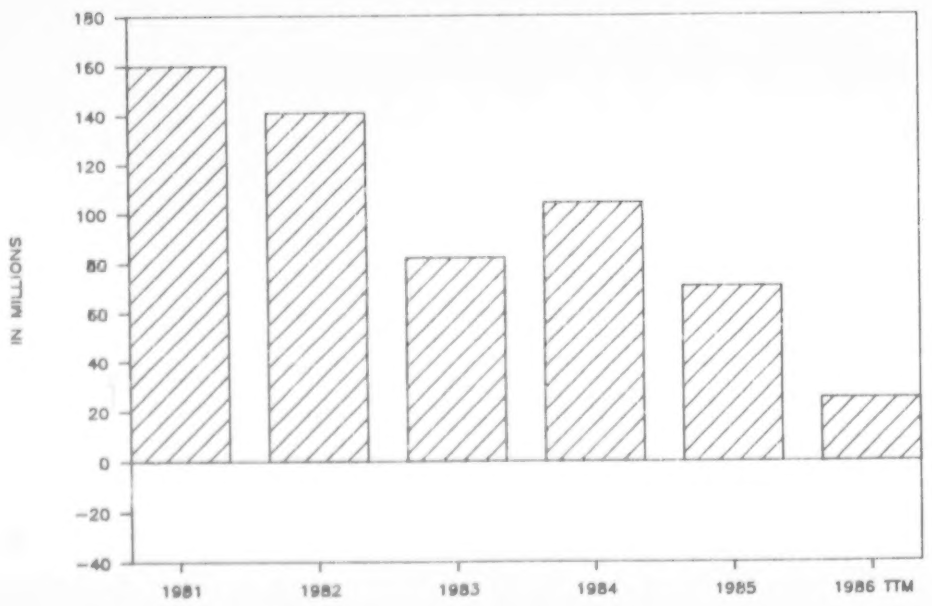


Land Drilling Sector

Anglo Energy
Astro Drilling
Bonray Drilling
DeltaUS Corp
Drillers Inc
Midland Southwest
Nicklos Oil & Gas
Rio Grande Drilling
Sage Drilling
South Texas Drilling
TMBR Drilling
Unit Drilling
Verna Drilling

SIMMONS & COMPANY INTERNATIONAL
Oil Service Statistics
Aggregate Net Income

PRODUCTION RELATED



Production Related Service Companies

Camco Inc
Daniel Industries
Kencope Energy
Lufkin Industries
Nowsco Well Service
Petrolite Corp
Production Operators
Service Fracturing
Trico Industries

STATEMENT OF MR. JACK TAYLOR, AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, OKLAHOMA CITY, OK

Mr. TAYLOR. Thank you, Senator. I am very glad to be here. I have been coming up here since about 1960, and I think this is the time that bodes more trouble than any I have seen in some 25 years that I have been coming to testify.

I might add, for those who may not be aware of it, the AAPG has been in business since 1917, headquartered in Tulsa, Oklahoma. We have about 43,000 members worldwide and about 35,000 in the U.S. We even have members in Saudi Arabia, in Iran, and Libya, I might add, so we do have a lot of information around the country.

Senator BOREN. Don't tell too much or we may have to call you before the Intelligence Committee. [Laughter.]

Mr. TAYLOR. Certainly I feel good in being under the luminescence of our two senators here from Oklahoma here today, Senator Boren, you and Senator Nickles.

I might add, I have been in business for 41 years—18 years with Mobil Oil Company as an exploration manager and 18 years now as an independent. And the AAPG collects data on exploration, has since the beginning, and we are the official dispenser of that. So, in a way I am merely saying that, as an organization, our figures are used by many organizations—the API, IPAA, and others. My good colleague here has quoted figures that I heartily agree with.

Two weeks ago we were up here, as you know, visiting with a number of Senators and with DOE and DOI principals. Our President, Bernold Hanson from Midland, and Dr. Fisher, who preceded me here in an earlier panel, is our most recent past President of the AAPG, were here, because we are so concerned with what we see happening.

I might add, Senator Boren, I am a nominee for President of the AAPG, so I am in politics, too, I guess.

But anyway, our own membership, in a poll done last September, has a 25 percent across-the-board unemployment figure. Since that time, we would say the total figures for unemployment, for jobless in the country, is 30 to 35 percent or more. That gives you an indicator of what is happening. These are the people who do the definitive work in directing exploration as to ventures and what happens to it in major companies, in independents, and individual entrepreneurs. That is our business.

We have seen roughly what looks like a production drop of 700,000 barrels a day in 1986. We have seen what appears to be the largest, by far, reserve drop in one year since records have been kept in this country. We have seen where drilling rigs are the lowest since records were started to be kept in about 1938 or 1937. We have seen seismic crews drop the lowest, except for one year when they first started in 1932, and we may be at that pretty soon. My colleague quoted 1934, and that is exactly right, according to my figures.

Seismic crew activity is one of the best indicators of exploration activity yet to come. It is a very close tie. According to this, if we got better overnight, it would be quite a while before you could get the infrastructure going again. Too many of our people are gone.

Too many of our seismic crews have faded away. There are not really many of us left.

The unemployment figures and our exploration data and numbers really don't tell the story. The story is, even those who are still hanging on have lost much of their facility to function, and that is what is happening across the country. We are losing this ability far beyond even to what the numbers indicate.

We cite the letter to the President dated December 29, which is part of my statement, Senator Boren, in which we are in support of an import fee. Our executive committee and membership have voted this. This is an unusual situation for the AAPG to be involved in because we usually avoid those representations commonly done by trade organizations. We feel so concerned with the dismantling of our exploration infrastructure, which is the group charged with finding oil and gas in this country, that we believe we must do something, yet even this, to try to retrieve and get us going again in the right direction.

There are a number of projections in the media and even from the Library of Congress, that has indicated that we will be at a 50 percent crude oil import figure out in the mid Nineties. According to our figures, it will be much more before this, because they have not taken into account the very great acceleration in drop in activity in the past year to year and a half and the shut down of production. And most figures will not be really totally available until about mid-1987. We have our own figures; we think they are good.

I might add, Senator, that our statement contains a series of 19 charts that set forth our troubles very quickly. We have seen the oil rig count that I have already commented on. I might comment on something that I think gets insufficient attention:

We hear a lot of talk about stripper wells. All right, some people might say, "Why do you want to support stripper wells, when they may be near the marginal limit?" There is a very good reason. That alone puts a large amount of production into the system.

But the most important thing of all, in my opinion, is something that is generally overlooked: We have an estimated resource base of about 34 billion barrels of enhanced oil recovery available in this country under present proved fields. Now, let us put that in perspective.

There have been 133 billion barrels produced since the Drake well in the middle eighteen hundreds. Yet, approximately one-fourth of that total yet remains as we define it, and the access to this—is existing stripper wells. That is how you get to it.

Senator BOREN. I think that is a very important point. I want to stop you at that point to emphasize it, because many people don't realize that; if a well is producing three barrels a day, they say, "Oh, well, we will get along without that three barrels a day, as tragic as that might be, since we have paid the environmental costs and the economic costs, the finding costs, and the rest." They don't stop to think, as you have just said, that those very small marginal wells are the access point for future action—new technologies that may be developed, old technologies that may become economic—to go back in. As I understand your statement, about a fourth of the oil that has been produced in the country is still there. We have not over the years been able—either for technologic reasons, cost reservoir, or otherwise—to extract all of the oil that we have discovered, that is right there, potentially recoverable through those wells. But that is the key that you use to unlock it. That is the way you get back in or stay in the reservoir, and then to use your enhancement techniques.

Mr. Taylor. That is right, Senator.

As a matter of fact, I would call it stripper wells in this area where their accessibility to EOR is a national treasure.

Senator Boren. Yes.

Mr. Taylor. Because most of this cannot and will not be redrilled, the capital outlay at the beginning to do this is too large. You have got to take them as they are now. And if you plug them now, which is happening very rapidly across the country—you lose the facility to that national treasure.

Senator Boren. Well, I think, while many of our colleagues over the last decade had become aware of the fact that we have a wide variation in cost of production of wells, they have come to understand the high-cost nature of stripper production and the fact that it will be lost forever if it is plugged. I think they have still very, very limited understanding of what you have just said, about these wells being the important access point to much larger reserves that are still there that could be tapped.

Mr. Taylor. That is right.

One more thing, Senator. There is something else that is generally missed, and that is the finding of oil and gas. I think a thing that is generally not known is that at least for the last 10 years, the yield in barrels of oil and gas equivalents—taking gas and converted at 6000 MCF per barrel, the way it is normally done—has stayed about flat in yield from new field wildcat drilling, on a per-foot drilled basis from NFW field reserves. The reason why this is important is, it means that we have kept our efficiency of finding up, we have improved our technology, we are finding as much now per foot drilled, as we did 10 years ago, on the average.

Another important point is that it's that finding of new fields that brings this capital outlay or this capital asset into play for primary production, secondary recovery, and EOR.

So we have been doing our job, except that we are now faced with the situation wherein the total economic force of a non-free market—despite the fact they say it is a "free market"—a non-free market has come a long way to almost shutting us down.

Senator, my report contains more charts and details. I don't want to go into that now; much of it has already been testified to. We are glad to be here. We subscribe to your proposed bill in total, and I am happy that we were called to testify here today.

Senator Boren. Thank you very much.

Our last witness was due to have been Mr. Carl Reistle, and as I understand it he has been called away and has been unable to appear. Certainly, from our own personal knowledge, we have a very worthy stand-in for him today, a person I have known for quite some time, Norman Fisher, originally from Texas, who is going to speak on behalf of the Society of Independent Gasoline Marketers.

Norman, we are very glad to have you represent the association.

[Mr. Taylor's written prepared testimony follows:]

American Association of Petroleum Geologists

Statement of John A. Taylor
before the
Subcommittee on Energy and Agricultural Taxation
of the
Senate Finance Committee

January 30, 1987

Thank you for the opportunity to be here today Mr. Chairman. I am representing the 35,000 U.S. member portion of the total 41,000 members of the American Association of Petroleum Geologists (AAPG) headquartered in Tulsa, Oklahoma, since 1917. I am a past officer of that organization and currently am chairman of the Committee on Government Affairs and am also a nominee for President Elect. I am a geologist and engineer and have been in the petroleum industry since 1946, and have worked in most of the oil areas of the U.S.

Three weeks ago our President, Mr. Bernold Hanson from Midland, Texas, Mr. Lawrence Funkhouser (President-Elect), from San Francisco, Dr. William Fisher (Past President), from Austin, Texas and I visited here with several Senators, Congressmen and with principals in the Departments of Interior and Energy. We had dispatched a letter to President Reagan on December 29, 1986, setting forth our great concern with the direction our industry is headed which we believe is driving our country toward a day of reckoning that bodes much trouble. The petroleum industry is already in trouble as to its economic condition and is fighting for survival. Our own membership showed an unemployment rate of 25% in September last year, but we believe the rate is considerably higher when non AAPG members and the continuing attrition rate since that time are included. We are especially concerned with supply of oil and gas when it appears that 1986 will have the largest drop in proven reserves in our history. Indeed, we lost 701,000 barrels of oil per day production during 1986 which is an 8% drop in one year. It takes exploration activity backed up by drilling rigs to find oil and gas, yet we dropped to half of the 1985 drilling rate during 1986 and continue to decline, the largest drop by far in our history.

Our letter to President Reagan is included in this statement. It cites our condition and sets forth our recommendations on how exploration might be encouraged. Also included in this statement are a series of charts that vividly point to our plight and where we are going unless something is done. The descriptive narrative with each chart speaks for itself.

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American Association of Petroleum Geologists

An International Geological Organization

BERNOLD M. "BRUNO" HANSON
President

[illegible]

December 29, 1986

The President
The White House
Washington, D. C. 20500

Dear Mr. President:

I currently serve as president of the American Association of Petroleum Geologists, an organization whose U. S. membership of 35,000 ranks as the largest association of earth scientists in the world.

AAPG can no longer stand by and watch the petroleum exploration infrastructure in the United States destroyed. In the 70-year history of AAPG, this condition has never been equaled. We are the professional group most closely involved in the exploration for and the production of oil and natural gas.

From 1979 to 1985, oil and natural gas production was stabilized in the 48 contiguous states. From 1982 through 1985, petroleum imports were reduced to about 28 percent with the price of oil at approximately $26 per barrel. We were able to increase domestic reserves under this pricing structure and it is in the national interest of our country that we continue these efforts.

The United States and our national security can ill afford to become more dependent on foreign oil. We must bridge the differential between today's price of oil and the minimum price per barrel amount that will rejuvenate a viable domestic exploration and reserve growth program.

We propose a combination of the following steps to reduce the differential:

1. Increasing the current import tariff to $5 per barrel.

2. Adoption of tax incentives for sustaining production and encouraging exploration. The tax incentives to supplement the import tariff should be:

   A. Royalty Credits for Exploration
   The federal government received a considerable amount of money in 1985 as royalty for oil and natural gas produced

on federal lands. Each producer should be allowed a credit of up to 50 percent of the royalty monies owed to be used for certifiable exploration activities.

B. A Tax Moratorium on New Discoveries

New oil and natural gas discoveries should be granted tax exclusions until prices recover to the $26 per barrel range. Any discovery well and a minimum of four successful follow-up wells should be free of tax for the first 18 months of production. This would stimulate exploration investment, particularly by the many independent operators who drill approximately 80 percent of the wells in the U. S. and who rely on outside investors for risk capital. The federal government would receive tax benefits from these discoveries over the remaining life of the field, typically representing 90 to 95 percent of a new field's income producing capabilities.

C. Certain Incentives Sustaining Production

a. Remedial Work on Wells

A direct tax credit offsetting expenditures should be given for remedial work on producing wells. This will enhance domestic production and increase reserves.

b. Enhanced Recovery Project

A major portion of discovered oil remains in the reservoir after primary recovery. Enhanced oil recovery techniques could recover much of this vast resource, but require a minimum price of $26 per barrel for start-up purposes. An investment tax credit covering the difference between current prices and $26 per barrel would stimulate these projects and develop currently identified resources that would otherwise be left in the ground.

There is profound geologic evidence to assure the American public that if the above outlined exploration and development incentives are granted, based on a $26 price equivalent per barrel, we can maintain stable levels of domestic production and prudent levels of imports. All measures of exploration and development activity have been plummeting in recent years and will continue to do so unless remedial measures are taken. The nation's interest is in jeopardy.

Respectfully Yours,

Bernold M. Hanson

Bernold M. Hanson

BMH/jl

Following are a series of exhibits and comments compiled by John A. Taylor to demonstrate the status of hydrocarbon exploration and production in the United States in response to the drop in price.

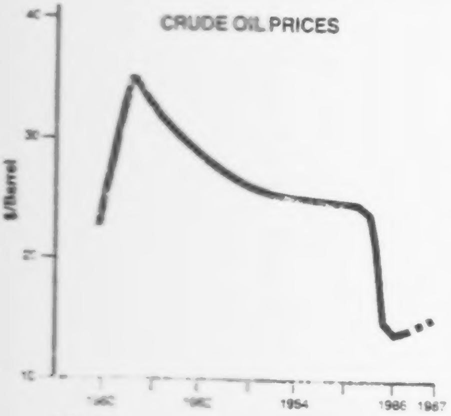


FIGURE 1

Source: Independent Petroleum Producers Association

Domestic crude oil prices have declined from $32 per barrel to $9 over the past several years, although recent action within the OPEC states has brought the price back up to about $18. Annualized, 1986 prices would be about $13.70 per barrel. It may be hard to maintain the $18 price owing to the very large crude oil inventories [illegible] worldwide. Finding costs in the United States range from $5-$11 per barrel, thus resulting in a lack of economic incentive for further oil reserve additions by exploratory drilling.

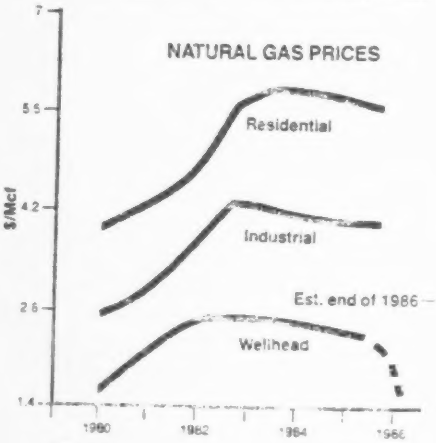


FIGURE 2

Source: Dept. of Energy

This chart, from the Department of Energy (DOE), shows the drastic cut in gas price to producers by pipeline companies over the past year, especially since March. Price is now estimated to be in the area of $1.50 per thousand cubic feet. Spot pricing was contributory to much of the drop. Annualized price in 1986 would be about $1.80 per thousand cubic feet.

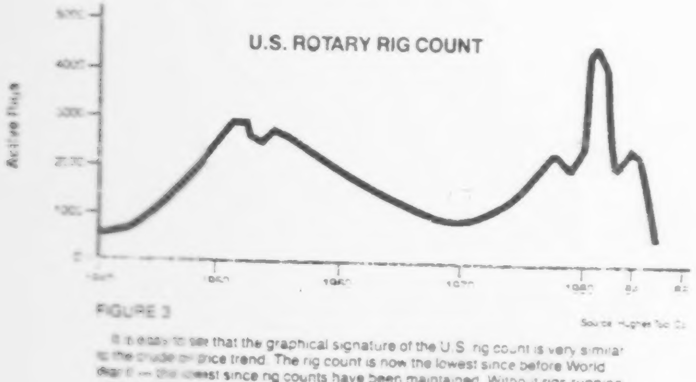


FIGURE 3

Source: Hughes Tool Co.

It is easy to see that the graphical signature of the U.S. rig count is very similar to the crude oil price trend. The rig count is now the lowest since before World War II — the lowest since rig counts have been maintained. Without rigs running, oil and gas cannot be discovered. Note the similarities of the crude oil price graph and this one.

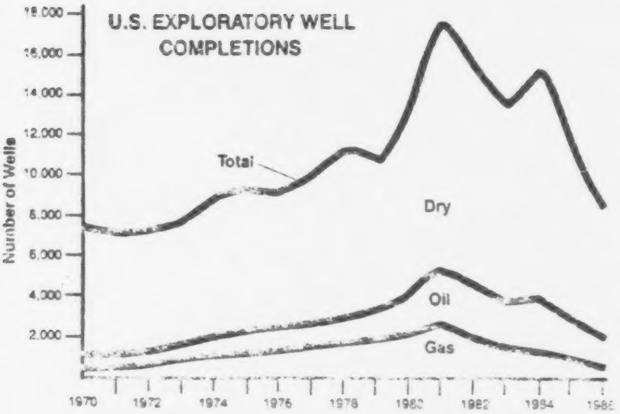


FIGURE 4

Source: American Petroleum Inst.

This demonstrates the rapid decline in the effort to find more oil and gas. The yield in new reserves per unit of effort would be even worse except for a significant increase in efficiency by industry — note the much greater decline in dry holes as compared to successful completions. The gain in gas completions as compared to that of oil in 1986 shows the shift of exploration efforts to the more favorable economics relative to gas, even though it too has suffered from price erosion.

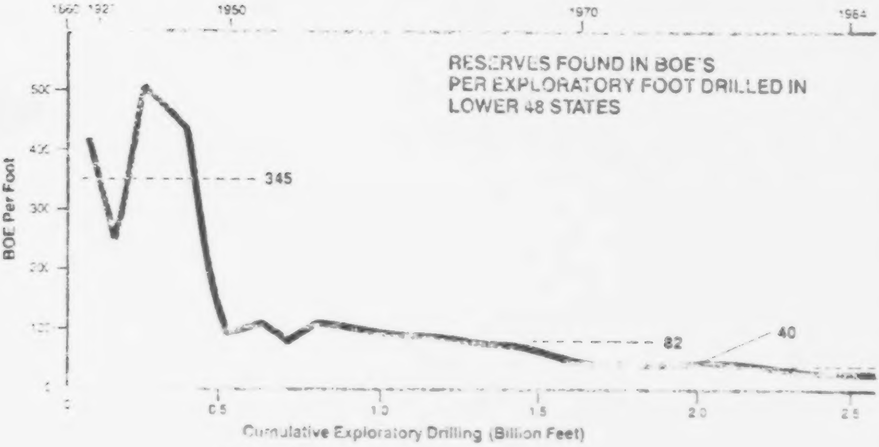


FIGURE 5

Reserves, plotted in barrels of oil equivalency (gas is valued at 6,000 cubic feet) and computed on a cumulative per-foot-drilled basis, reveals plateaus of yield. The first plateau from 1860 to the late 1940s averaged 345 BOEs per foot drilled. From 1950 to the late 1960s the yield plateaued at 82 BOEs per foot. We have been operating on a plateau of 40 BOEs per foot since that time. Even though the yield per foot has dropped, the value of the product has increased. The chart shows the abilities of geologists and improved recovery technology to provide a stable supply of reserves for prolonged price-stable periods. Industry only needs a reasonable, stable market and the encouragement to continue.

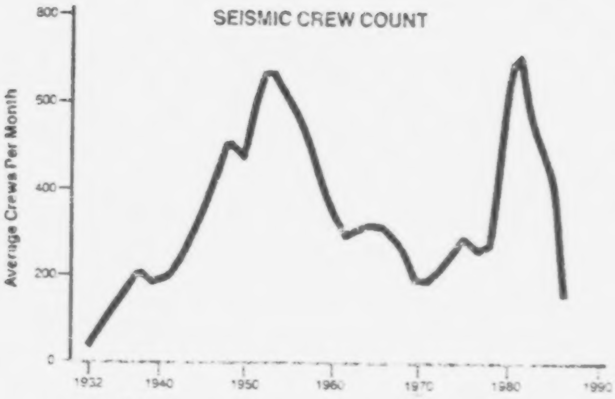


FIGURE 6

Source: Society of Exploration Geophysicists

The seismic crew count is at its lowest since 1935. Records were first begun in 1932. Total land seismic crews plus marine seismic crews plummeted 55 percent, from 357 to 156 in the past year. Seismic crew activity has been one of the best indicators of future exploratory activity. This indicator demonstrates the dismantling of the U.S. petroleum industry to an extent never before seen in this century.

The situation is underscored by the results of an AAPG survey which showed an unemployment rate of 25 percent among Active members. We believe the rate to be even higher when other member categories and non-AAPG members are considered. Even the lay-offs in the early 1930s depression years did not approach these figures.

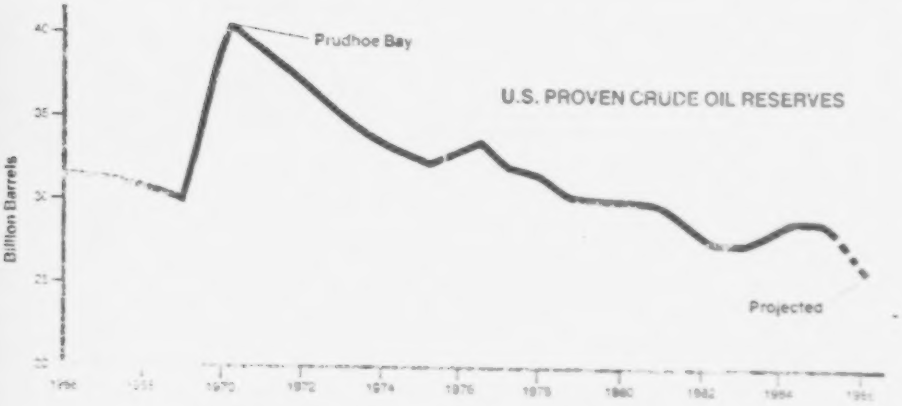


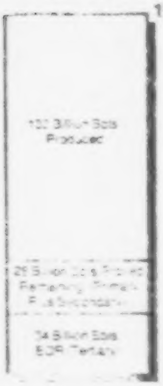
FIGURE 7

American Petroleum Institute
[illegible]

From 1970 through 1978 proved crude oil reserves in the U.S. fell from 39 billion to 29.8 billion barrels. From 1979 through 1985, with increased levels of drilling, reserves dropped slightly, and in 1984 and 1985 U.S. reserves actually increased. But, 1986 figures will likely show a significant decline in oil reserves, perhaps to below 28 billion barrels. The combination of drastically reduced rig activity and write-downs in reserves due to decreased economics will cause this large drop. Thus, we become even more dependent upon foreign imports.

ENHANCED OIL RECOVERY POTENTIAL

195 Billion Bbls. Produced or Producable



- EOR (Tertiary) potential represents 21% of total cumulative production plus proved remaining reserves.
- Over 450,000 stripper wells provide access to a significant part of this resource.
- Of 34 billion bbls., 14.5 are recoverable by technology now in place which could supply total crude needs for 4.4 years.
- Of 29 billion bbls. proved remaining, 4.5 will come from presently defined stripper wells.
- Loss of stripper wells is loss of access to major part of this resource.

Source: National Petroleum Council

FIGURE 8

Stripper wells make up 15 percent of total crude oil production and their importance as a guardian to future supply is immense. They produce 10 barrels daily or less and are especially vulnerable to low prices. Economic projections indicate that at $10 per barrel, more than 40 percent of the stripper wells will be abandoned. At $15 it is estimated that 20 percent will be abandoned. Stripper wells provide access to the very large potential of remaining oil in place that cannot be produced by primary means or even from secondary recovery procedures. About two-thirds of the original oil in place still remains after these recovery processes have been undertaken. Enhanced oil recovery (EOR) projects such as steam, carbon dioxide, and chemical injection procedures must be employed to gain additional production.

Stripper wells are a national treasure, and yet stripper wells are now being plugged by large numbers owing to the artificially low prices for crude. A natural resource is being destroyed. The capital investment to recover much of the EOR potential may be prohibitive.

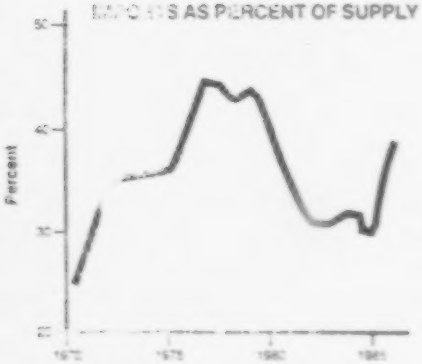


FIGURE 9

Industry was encouraged to increase supply in order to decrease our dependence on foreign imports, a policy that started in the mid-1970s. Imports had reached 48 percent in 1977, the highest ever. Industry effort brought that down to about 28 percent in 1983. But, by August 1986, it had increased to 40 percent. It is rapidly on its way to 50 percent because of the sharp drop in the drilling, the write down in reserves and the plugging out of much U.S. capacity owing to the poor economics of low priced crude oil.

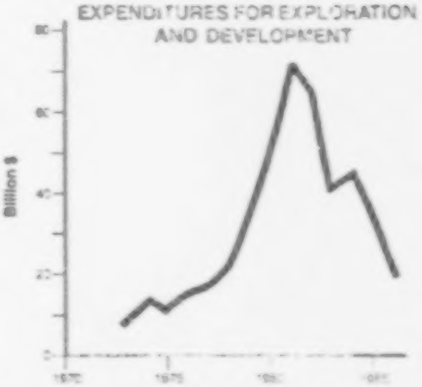


FIGURE 10

Source: [illegible]

This chart says it well. The figure indicated for 1986 is probably too high. When all the figures are in, it may be nearer to $15 billion rather than $18 billion. This is a drop from $33 billion in 1985 which in turn had dropped from a peak of $73 billion in 1981. Industry has continued to cut its expenditures, leading to a continued fall in drilling.

We have never asked for handouts but only reasonable incentives to balance the high risks we take. Furthermore, we have directed the Federal Government's attention to the strategic concerns on oil, and how the again increasing imports compromise that position by their effect on balance of payments and the cost of defending the sea lanes and overseas bases to guard those sources. The oil of the Persian Gulf is cheaply produced. Even today our government has dispatched an increased warship presence into the Persian Gulf. But, these costs of production are only the base of a pyramid, which includes price setting by OPEC, potential embargoes for political and stategic purposes, the interdiction of supplies by warring regional countries such as Iran and Iraq, and the task of defending the oil at its source and along its extensive and complex land and sea routes, against military predators and hostile regimes.

Mr. Chairman, we believe that we have been doing a good job in finding the oil and gas this country needs. We have done it well enough that, coupled with improving conservation measures, we had managed to bring the supply of oil and gas up in response to the demand in this nation and induce a price reduction thereby. This reduced imports from 46% in 1977 down to 28% in 1983 and thus enabled us to wield a much heavier hammer in the game of oil geopolitics. Now it's on its way back up, even reaching beyond 40%. We predict it will reach 50% much sooner than many of the public media and trade reports are projecting.

The country has a good thing going in those of us who will continue to devote high energy to the quest for petroleum if there are reasonable incentives to do so. Thank you, Mr. Chairman, for the chance to be here today and represent our views.

STATEMENT OF NORMAN POTTER, SENIOR VICE PRESIDENT OF WAREX PETROLEUM CORP. ON BEHALF OF THE SOCIETY OF INDEPENDENT GASOLINE MARKETERS OF AMERICA

Mr. POTTER. Thank you, Senator, and thank you again for bringing up the fact that Carl Bolch could not attend. As you well know, there are a lot of differences between Carl Bolch and myself, most notably that he has money and I have children. [Laughter]

My name is Norm Potter, and I am Senior Vice President of Warex Petroleum Corporation. I am appearing here today on behalf of the Society of Independent Gasoline Marketers of America, which is a national trade association of approximately 300 independent marketers and chain retailers of motor gasoline. SIGMA's members market refined petroleum products in all 50 states and account for approximately 20 percent of the United States retail motor gasoline market.

As petroleum product marketers. SIGMA is concerned with the state of the domestic oil industry, and we believe that the United States must have a strong, healthy oil industry. As such, SIGMA favors and encourages the prompt repeal of the windfall profits tax on domestic crude oil, and the changes in the tax law specified in S. 233 and S. 255, to make the Internal Revenue Code more equitable for the domestic industry.

These actions would help promote the viability of the oil industry, while eliminating market distortions which result from unwarranted government intervention.

The windfall profits tax, for example, reduces the market incentive for producers to invest during the bad times by limiting the rewards in future good times.

Consistent with its views that government intervention which causes market distortion should be avoided, SIGMA strongly opposes the imposition of any tax on the import of crude oil and all petroleum products. An oil import tax would distort competition in the domestic oil industry, unfairly disadvantage energy-intensive industries such as agriculture, steel and petrochemicals, and reintroduce government as a full participant in the oil industry, with the accompanying sprawling, oppressive, and inefficient bureaucracy that that entails.

No one can seriously dispute that the United States will have to rely increasingly on oil imports to meet its energy needs. Thus, the level of oil imports by itself cannot be a determinant of this country's national security. Rather, the sources of the foreign oil supplies upon which the United States will have to depend, now and in the future, are the key factors in this country's national security equation.

The United States currently imports oil and refined petroleum products from over 40 countries. The majority of the oil comes from close allied nations such as Canada, Venezuela, the United Kingdom, and Mexico. Imports from these countries alone amount to over 46 percent of the crude oil imported by the United States in the first 10 months of 1986.

Venezuela, a close and dependable ally which has never used oil as a political weapon and has supplied this country continuously for over 60 years, is the nation's largest foreign supplier of petroleum products. Our Western Hemisphere neighbors currently supply 68 percent of all residual fuel oil imports into the United States, 80 percent of all the imported distillates, and 55 percent of all gasoline imported into this country.

These kinds of statistics do not indicate that even a growing American dependence on imported oil somehow threatens our national security.

In addition, an oil import tax has serious negative consequences, not only to the domestic oil industry but to the economy as a whole. An oil import tax would cause oil prices to rise in the United States. For that matter, it would cause the price of all energy sources to rise.

Particularly hard-hit will be energy-intensive industries such as petrochemical, agriculture, the airlines, mining, and manufacturing.

An oil import tax would seriously injure competition within the oil industry, because of the ability of the vertically integrated major oil companies to establish the price of crude oil in the domestic market.

An oil import tax will give these vertically integrated companies greater control over the domestic industry, to the detriment of independent marketers' and independent refiners' competitive position.

The complex government bureaucracy required to administer an oil import tax and the exemptions that would invariably be made a part of such a program is self evident.

Finally, SIGMA cannot emphasize too strongly that there is absolutely no justification for any oil import tax which imposes a higher fee on finished products than on crude oil imported into this country. Such a measure would be especially injurious to independent marketers, and we can speak from personal experience, and to consumers, while benefitting only a narrow sector of the United States economy.

An import tax differential would effectively foreclose access to foreign products; thereby, it would weaken marketers' competitive position. With access to imports restricted, domestic refiners would have little incentive to sell motor fuels to independent marketers at competitive prices.

The minimal share of the domestic market for petroleum products which is supplied through imports, coupled with the profitability of the refining segment of the petroleum industry, demonstrates that protection for domestic refiners, in the form of a high import tax on the refined products that are in crude oil, is unjustified and would result in an enormous windfall to them at the expense of consumers and the economy in general.

We note and applaud the fact, Senator Boren, that you did not include a differential in your bill S. 302.

This includes my remarks, and SIGMA appreciates this opportunity to express its views. Thank you very much.

[The written prepared testimony on behalf of the Society of Independent Gasoline Marketers of America follows:]

United States Senate
Committee on Finance
Subcommittee on Energy and Agricultural Taxation

Statement of Carl Bolch, Jr.
on Behalf of the
Society of Independent Gasoline Marketers of America

January 30, 1987

My name is Carl Bolch, Jr. I am Chairman of the Board and Chief Executive Officer of Racetrac Petroleum, Inc., of Atlanta, Georgia, and First Vice President of the Society of Independent Gasoline Marketers of America, on behalf of which I appear today. My company, Racetrac Petroleum, Inc. owns and operates 250 retail gasoline outlets in 12 Southeastern states. SIGMA is a national trade association comprised of approximately 280 independent marketers and chain retailers of motor fuels. SIGMA's members market refined petroleum products in all 50 states and account for approximately 20 percent of the United States retail market for motor gasoline.

The purpose of these hearings is to discuss the state of the domestic petroleum industry and to review proposals included in bills introduced by Senator Boren (S.302, S.233, S.255). S.302 would impose a tax on imported crude oil and refined petroleum products. S.233 would exempt purchasers of stripper well oil property from the Windfall Profits Tax and repeal certain restrictions on tax benefits afforded the oil industry under I.R.C. §§613 and 1254. S.255 would repeal the Windfall Profits Tax on domestic crude oil.

SIGMA favors and encourages the prompt enactment of S.233 and S.255. Both legislation would promote the viability of the petroleum industry by eliminating market distortions which result from unwarranted government intervention in the oil industry.

Consistent with its support for S.[illegible] and S.[illegible], SIGMA opposes any tax on imports of crude oil and petroleum products. Any such tax would distort competition in the domestic petroleum industry, unfairly disadvantage energy intensive domestic industries, such as agriculture, steel, and petrochemicals, and unnecessarily increase governmental interference in the oil industry.

SIGMA's Interest

Independent marketers, such as SIGMA's members, have had a beneficial impact on price competition in the retail gasoline marketplace. We have introduced such marketing devices as self service, high volume/low margin marketing, and automated retail marketing. In fact, private brand marketers historically have been recognized as the most price-competitive segment of the retail gasoline market.

We neither produce nor refine crude oil. Thus, we are entirely dependent upon third parties for our sources of supply. Moreover, we compete directly at the retail level with companies from which we obtain supplies of product at wholesale. Our ability to price competitively derives from our functional efficiencies. Our innovative marketing concepts and systems of cost control have minimized the amount of fixed costs which must be recovered in the per unit price of motor fuels. Such efficiencies can generate a cost advantage of as much as one or one-and-one-half cents per gallon. However, this cost advantage is relevant in the marketplace only when we can obtain competitively-priced supplies at the wholesale level. Absent the availability of such competitively-priced products, the efficiencies and innovations of independent marketers would be rendered irrelevant in the market and independent marketers would not survive.

By achieving lower operating costs, SIGMA's members can assure their economic viability, provided that product can be obtained from sources at competitive prices which will permit these efficiencies to be relevant in the marketplace. In the current market, access to foreign products is the single most important factor which assures that competitively-priced product will be available, thereby, allowing the functional efficiencies of independent marketers to be increased in the market. This enhancement results from two facts: (1) imports function as an obvious addition to total supply and, more importantly, (2) the availability of foreign products to participants in the United States market induces competitive pricing by domestic refiners who otherwise would have no incentive to deal on a competitive basis with their marketer-competitors. Access to foreign markets, rather than the volume of products actually imported, constitutes the principal incentive for refiners to sell competitively-priced product to their marketer-competitors. Absent this incentive, competition at the retail level of the gasoline market would be reduced significantly.

Minimal Governmental Intervention in the Oil Industry Should Be a Basic Tenet of United States Energy Policy

There is no question but that the present policy with respect to imports is [illegible]. For the first time in decades, United States energy policy is competitively neutral with respect to imported crude oil and petroleum products. The present policy has provided a level playing field for all sectors of the oil industry. By dismantling many of the governmental protections previously afforded to crude oil producers and refiners, the government has allowed the forces of supply and demand to operate, thereby minimizing market distortion. The effects of this deregulation have been beneficial. Prices of oil have declined. Today, United States sources of supply are diversified and much more secure than in the 1970s. 2/ This is a far cry from the situation in [illegible], when [illegible] percent of our crude oil and product imports came from suppliers in the Middle East.

The experience of the last four decades demonstrates that a competitively neutral government policy in the petroleum industry is the answer. It is important that we not ignore the disruptive and inflationary results of our past failures in energy

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2/ Today, [illegible] percent of U.S. imports of crude oil and petroleum products come from suppliers in the Western Hemisphere. Over [illegible] percent of crude oil and petroleum product imports come from Canada, Venezuela, and Mexico. Only [illegible] percent of imports of crude oil and petroleum come from Arab OPEC countries.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

exploited by the United States. In addition, these programs resulted in higher retail oil prices than would otherwise have been the case.

The policies of the 1960s laid the groundwork for the oil crises of the 1970s. Restrictions on imports under the Mandatory Oil Import Program, coupled with price controls imposed by President Nixon in 1971, created shortages in the United States and enormous pent-up demand. When President Nixon lifted import controls in 1973, America's oil industry quickly sought to import large quantities of crude oil from foreign producers that were unprepared to meet such increased United States demand. In effect, by attempting to isolate the United States from world crude oil markets, government intervention had made the country critically dependent on these markets during a period of burgeoning demand.

The government regulation of the 1970s ensured the existence of a vast and expensive government bureaucracy. As with the Mandatory Oil Import Program, price and allocation controls necessitated the creation of an extraordinarily complex set of regulations and procedures, resulting in a burgeoning bureaucracy and another complex set of regulations for granting exceptions.

Worldwide prices of crude oil spiraled upward until they reached a peak in early 1981, when President Reagan dismantled price and allocation controls. World crude oil prices immediately began to erode and have been falling ever since. Thus, the dismantling of oil controls and the resulting fall in the price of oil has been the single biggest factor arresting inflation in the past five years. Furthermore, the so-called shortage of the 1970s was revealed for what it really was — not a physical shortage, but a market distortion created by government interference.

During the five years since deregulation, independent marketers have had access to competitively priced supply and have been able to capitalize on their efficiency to become the most competitive sector of the oil industry. Consumers have been able to realize significant savings in their energy bills and have been able to reallocate their spending in a way that has spurred economic growth.

SIGMA Supports the Enactment of S.233 and S.255

The beneficial effects of deregulation should be further augmented by repealing the Windfall Profits Tax and the Fuel Use Act. These actions would further the goal of maintaining a competitive industry with minimal government intervention.

The Windfall Profits Tax was ill-conceived and unfair when it was enacted. Its only function today is to deter investment in domestic production. Just as other industries suffer downswings in the market and then reap the benefits of upswings in their markets, so, too, should the oil industry. The downswing which the petroleum industry has experienced has required it to become more economically efficient. Any upswing in prices will not be a windfall but rather the reward for achieving those efficiencies. Thus, the government should eliminate the Windfall Profits Tax and permit the market to reward in good times those who carry the burden in bad times. The Windfall Profits Tax, by limiting future rewards, reduces the incentive to invest during the hard times. Enactment of the other proposals contained in S.233 and S.255 similarly will eliminate unjustified government interference in the petroleum industry. The government should learn the clear lesson of the last four decades and permit petroleum markets to operate in an unfettered manner.

An Oil Import Tax Should Not Be Enacted

Despite the considerable benefits to the American people of a free marketplace, proponents of an oil import tax have attempted to justify new government intervention on the ground that the absence of controls on oil imports could lead to a security-threatening dependence on imported energy. They argue that an oil import tax would prevent such dependence by stimulating domestic exploration and exploitation of new reserves and reducing domestic consumption. An oil import tax, far from being sound energy policy, is an invitation to repeat the mistakes of the past.

Dependency, however, does not automatically equate to a national security threat. Given the fact that the U.S. oil industry is "mature" and limited in resources, the United States will always have to rely on foreign sources of supply unless it is to burden its people and its industry with energy costs that are much higher than other countries against whom we must compete. A vital part of our national security is keeping our industry healthy and competitive in a world marketplace. Our industry will deteriorate if our energy costs are higher than our foreign competitors. National security must be measured by our vulnerability to supply interruptions.

A determination of whether the United States' national security is in danger must be based upon an examination of the sources of foreign supply as well as the other measures the United States has undertaken to protect against supply disruptions. Through an adequate Strategic Petroleum Reserve, and with the development of numerous and diverse suppliers, the United States can lessen its vulnerability to supply disruptions without harming its domestic industry thereby rendering it weak and vulnerable.

The petroleum problems which occurred in 1973 and in 1979 resulted from an inadequate SPR [2] and from a dependence on foreign supply from the middle eastern countries. Today, the SPR stands at 508 million barrels. This is sufficient to withstand a total import interruption from Arab OPEC suppliers of 512 days. Additionally, the United States imports its petroleum from over 40 countries. The majority of the petroleum comes from close, allied nations such as Canada, Venezuela, the United Kingdom, and Mexico, with imports from these countries alone amounting to over 46 percent of the crude oil imported by the United States in the first ten months of 1986.

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[2] The SPR was not in existence in 1973. In 1979, the SPR was still in its infancy.

SIGMA believes that the current level of oil imports does not threaten the status of United States' national security. However, even if there were a threat, the imposition of an oil import tax is the least efficient means the government could utilize to enhance national security.

An oil import tax would cause oil prices to rise in the United States, uniquely increasing the costs incurred by the domestic industry. Particularly hard hit will be such energy-intensive industries as petrochemicals, agriculture, airlines, mining, and manufacturing. The increased costs attributable to an oil import tax would fuel inflation in the domestic economy because the prices for the products generated by these industries would necessarily increase. Inflation would slow economic growth and weaken the competitiveness of the domestic industries vis-a-vis their foreign counterparts, thus, hurting further the international trade imbalance of the United States. These serious economic ramifications counsel against the enactment of an oil import fee.

An oil import tax would seriously injure competition within the oil industry because of the ability of vertically integrated major oil companies to establish the price of crude oil in the domestic market. These companies can establish these prices as a result of: (1) their own very substantial production; (2) their dominance over the gathering and transportation systems employed to move most crude oil; and (3) the fact that their refineries represent at least 70 percent of the market for domestic crude oil.

An oil import tax will give these vertically integrated companies greater control over the domestic industry to the detriment of independent marketers' and independent refiners' competitive position. This shift in market power, and corresponding increased profits, do not mean that the vertically-integrated oil companies will increase their oil exploration programs or improve efficiencies.

Finally, history has shown that oil import taxes and quota programs inevitably spawn a vast, expensive and inequitable government bureaucracy. The bureaucracy required to administer the Mandatory Oil Import Program is a case in point.

The complex regulations and exceptions procedures created under that program constituted unnecessary government intervention in an industry that would have served United States consumers far better had it been left unregulated. Adoption of an oil import tax would necessitate the reestablishment of a similar administrative apparatus to implement the tax and to deal with the inevitable exception requests. Indeed, some of the legislation that has been proposed already envisions exemptions from the tax's application. Senator Boren's bill, for example, would exempt oil intended for producers of United States exports. The likely difficulties that would be encountered in determining how to apply such exemptions are reminiscent of the complex and involved regulatory problems that arose under the Mandatory Oil Import Program and price and allocation controls.

In summary, an oil import tax would encourage the use of expensive, limited reserves located in the United States. Draining America first might discourage immediate vulnerability, but in the long run would leave the United States even more dependent upon foreign oil supplies. An oil import tax also would uniquely increase the costs of energy-intensive domestic industries, thereby rendering them less competitive in the world market. Further, an oil import tax would distort the competitive structure of the domestic petroleum industry. Finally, an oil import fee would lead unavoidably to the creation of a large and unwieldy government bureaucracy to administer it.

SIGMA Strongly Opposes Any Oil Import Tax Which Is Higher for Refined Products than for Crude Oil

While S.302 does not propose a higher oil import tax on petroleum products than is proposed for crude oil, a number of domestic independent refiners have advocated such a proposition. There is no justification for an oil import tax which imposes a higher fee on finished products than on crude oil (a differential). Such a measure would be especially injurious to independent marketers and to consumers, while benefitting only a narrow sector of the United States economy.

A differential would effectively foreclose access to foreign products and thereby weaken marketers' competitive position. The higher levy on product imports would price us out of the market. With access to imports restricted, domestic refiners would have little incentive to sell motor fuels to independent marketers at competitive prices. In the absence of competition from independent marketers, domestic refiners could raise their gasoline prices considerably.

Proponents of a differential tax contend that it is needed to protect the United States' national security. In particular, certain refiners have argued that the national security is threatened by the continued decline in the United States' refining capacity. This assertion is fallacious for two reasons. First, imports are not the cause of the decline in refining capacity. Second, the situation at present, and for the foreseeable future, is not one in which there is a threat to the national security.

The cause of the decline in United States refining capacity since 1981 has been the change in conditions in the United States' refining market. Prior to 1981, the entitlements program and crude oil price controls created artificial incentives for the construction and expansion of domestic refining capacity. Domestic price and allocation controls directed the development of the domestic industry while OPEC policies dominated the foreign crude and refining markets. Construction of new facilities outpaced growth in product demand, leading to a capacity surplus in 1980 for the first time since 1962.

With decontrol in 1981, competition returned as the norm for an industry that had learned to look to the government for the establishment of goals and incentives. Overcapacity in crude oil production and refining capacity is well-documented and, in fact, admitted by those seeking protectionist legislation. It is generally acknowledged that mostly small inefficient refineries and older refineries not possessing state-of-the-art technology have closed. This process is the natural result of a marketplace adjusting to lower demand from overcapacity.

Protectionists would like you to believe that their problems are caused by an overwhelming flood of imports. The facts show otherwise.

Finished motor gasoline imports constituted only 4.3 percent of United States consumption during the first ten months of 1986; this represents a drop in imports of motor gasoline from 1985 when such imports constituted 5.6 percent of United States' consumption. Imports of finished petroleum products (motor gasoline, aviation gasoline, jet fuel, kerosene, naphtha, distillates, residual fuel, lubricants, waxes, petroleum coke, asphalt, and road oil) averaged only nine percent of United States demand for the first ten months of 1986.

Much is made of the number of refineries which have closed since January 1981. Most of the refineries that have closed since 1981 are those small refineries that benefitted from government protection in the 1970s. Thus, over 85 percent of the 122 refineries reported to have ceased production as of January 1, 1986 were refineries with less than 50,000 barrels per day production capacity. Eighty-five had a capacity of 30,000 barrels per day or less. Forty-nine of those refineries were opened immediately prior to or during the period of small refiner protection. Preliminary figures from the United States Department of Energy show that only four small refineries with a capacity of less than 45,000 barrels per day closed during 1986. But during this same period, seven new refineries were opened or reactivated. This situation constitutes a reversal of the 1981 to 1985 trend and suggests that the period of adjustment has ended.

Efficient refiners were generally quite profitable in 1986. During the first and second quarters in 1986 all of the largest 13 integrated and independent refiners except one earned sizable profits on their refinery and marketing operations.3/ In addition, eight of the 13 principal refiners reported increased profits from refining and marketing from the first quarter to the second quarter of 1986.

3/ Refining and marketing profits are generally combined in financial reports and not reported separately.

Certain refiners point to imports of products from Arab OPEC refineries, arguing that they constitute a threat from which the United States refining industry needs protection. There is no indication of any such threat in the foreseeable future for despite the opening of several new refineries, imports from these sources are at low levels and have not increased appreciably.

Product imports from Saudi Arabia, for example, were only 2.65 percent of total imports (less than one-fourth of one percent of domestic refined supply) through the first ten months of 19[illegible] . Indeed, far from increasing their production, the Saudis have taken steps to curtail their product output. For example, in 1985, Saudi refiners postponed indefinitely plans for two new refineries, at Riyadh and Ras Tanora, that would have expanded production capacity by 450,000 barrels per day.

The United States has ample refining capacity in case of an emergency. Testimony by the Department of Defense, the Department of Energy, and others, has stressed that there is no threat at current [4/] or foreseeable United States refining levels. [5/] Moreover, Department of Energy statistics show that the United States presently has more than enough refining capacity to meet domestic needs.

In addition, the United States is less vulnerable to supply interruptions than at any time in the past twenty years because imports come primarily from secure and reliable sources. According to Department of Energy statistics, 50 percent of product imports come from Western Hemisphere sources. In contrast, total product imports from all Arab OPEC nations amounted to only 9.4 percent of United States imports in 1985.

4/ Current demand for all petroleum products is 16.4 million barrels per day. U.S. Department of Energy, Energy Information Administration, Petroleum Supply Monthly, October 1986 (December 1986).

5/ See, e.g., Impact of Imported Petroleum Products on the Domestic Petroleum Industry, Hearing Before the House Committee on Energy and Natural Resources, Subcommittee on Energy Regulation and Conservation, 99th Cong., 1st Sess. (June 4, 1985) ("Hearing") (Testimony of Danny J. Boggs, Deputy Secretary, U.S. Department of Energy).

Our neighbors currently supply 68 percent of all residual fuel imports in the United States, 80 percent of all imported distillates, and 55 percent of all gasoline imported into this country.

Motor gasoline imports from Canada and Venezuela have increased in relation to imports from other United States suppliers over the past several years. Canadian gasoline imports, for example, have increased from six percent of gasoline imports in 1984 to over nine percent from January through October 1986. [6] Western Hemisphere sources such as Mexico and Venezuela have proven reliable during past emergencies and crises and are secure from the war and turmoil that threatens the Middle East. In addition, transportation from sources such as Canada, Mexico, and Venezuela is quick, and not subject to long delays.

Those relatively few product imports from other sources derive from a variety of suppliers, thus ensuring against excessive United States dependence on any one country or group of countries. Motor gasoline imports in 1985 and 1986, for example, were obtained from over 20 exporting countries, most of which are traditional suppliers located outside of the Persian Gulf.

This situation is unlikely to change significantly in the foreseeable future. Our Western Hemisphere neighbors will continue to be a secure and stable source of imported petroleum products because of their considerable petroleum reserves [7] and proximity to United States markets. In addition, there is no evidence that imports from suppliers outside of the Western Hemisphere (which because of their distance from the United States are more vulnerable to supply interruptions) will increase above their present low levels.

6/ U.S. Department of Energy, Energy Information Administration, Petroleum Supply Monthly, October 1986 (December 1986).

7/ Mexico, Canada, and Venezuela all rank among the top 17 oil producing nations in official reserves.

In sum, there is little evidence of a national security threat from petroleum product imports at present or for the foreseeable future. The secure position that America enjoys is evidence that the present energy policy is well-suited to ensure against a threat to our national security. A neutral policy with respect to oil imports has encouraged and resulted in a diversity of suppliers, virtually all of whom are reliable and secure from disruption.

The domestic refining industry also has argued that it needs a higher levy on refined products to meet its special "environmental costs" and, thus, stay competitive. There appears to be no basis for such an additional differential to cover United States refiners' environmental costs. Based on data from the American Petroleum Institute, 8/ it is difficult to believe that refiners' environmental costs justify a differential.

API's figures indicate that total environmental expenditures for manufacturing, including capital and operating and administrative expenses amounted to less than 60 cents per barrel over the ten year period ending in 1983. These figures are based on responses to an American Petroleum Institute questionnaire from companies representing 77 percent of United States refining capacity. The 60 cents per barrel figure includes expenditures (such as those to ensure compliance with the Clean Air and Water Acts) required of all United States manufacturers. It also includes expenditures (such as those connected with production of unleaded gasoline) required by United States law of all refiners, foreign or domestic, who intend to sell in the United States market. If these latter environmental expenses are excluded, the cost per barrel to United States refiners would be even less than the 60 cents per barrel indicated by the refining industry itself.

The current tariffs on many refined products already provide a substantial offset to such costs. For example, the present tariff on motor fuel imports of 52.5 cents

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8/ American Petroleum Institute, Environmental Expenditures of the United States Petroleum Industry 1974-1983, Publication No. 4384.

per barrel would appear to permit domestic refiners to cover most or all of the environmental costs associated with the refining of gasoline. 9/

Conclusion

In conclusion, the past five years have demonstrated the wisdom and desirability of decreasing governmental intervention in the petroleum market. Minimal governmental intervention has helped the overall economy by lowering the prices of goods produced from oil and by helping stabilize inflation. SIGMA enthusiastically endorses the prompt enactment of S.233 and S.255 as appropriate further action to reduce unnecessary government-imposed burdens on the market's operation.

SIGMA opposes the enactment of any form of oil import tax. Such a tax would distort the competitive structure of the petroleum industry to the detriment of independent marketers, independent refiners, and consumers. Moreover, an oil import tax would raise energy costs for domestic industries, impairing their competitive position in world markets.

SIGMA emphasizes that any oil import tax which imposes a higher fee on imports of products than is imposed on imports of crude oil is unjustifiable and would irreparably damage the competitive viability of independent marketers. The minimal share of the domestic market for petroleum products which is supplied through imports, coupled with the profitability of the refining segment of the petroleum industry clearly, demonstrate that protection for domestic refiners is unjustified and would result in an enormous windfall to them at the expense of consumers and the economy in general.

SIGMA appreciates this opportunity to express its views. I gladly will respond to any questions which my testimony may have raised.

9/ Claims that U.S. refiners are disadvantaged by Superfund taxes are misleading. In fact, imports of petroleum pay a higher tax than their domestic counterparts.

Senator **Boren**. Thank you very much, Mr. Potter.

Would you amplify that comment that you made in terms of the differential and how it effects especially the non-integrated independent marketers? Explain again how that puts the independent marketer at a disadvantage.

Mr. **Potter**. In the course of day-to-day business, we are negotiating both with offshore companies and domestic companies for sources of supply. We increasingly find, as independent marketers, in dealing with the major brands, that we are not necessarily wanted as a customer in their distribution system or for their sources of supply, unless we are willing to take down our identity as an independent and fly their flag as a major representative. We feel that such a differential would force us to lose our identity and our place in the downstream marketing of petroleum products.

Senator **Boren**. Well, I appreciate those comments. I find them very interesting.

I know there is an additional problem. It is not the subject of this hearing today, but I gather the collection point for excise taxes is creating something of the same potential problem in terms of upsetting the competitive balance within the industry, in that the independent retailer will have to put up cash more quickly than undoubtedly will the integrated retailers.

Mr. **Potter**. It definitely has an impact on our cash flow, and it tilts competitively the playing field in the sod of the so-called "integrated major marketer."

Senator **Boren**. That is not the subject of the hearing today, but I know that is something that the full committee is aware of, I am sure, as we look at the technical corrections to the tax bill, and it is something that, if not addressed, this subcommittee will again open as an area of discussion in terms of the collection point of the excise tax.

We have almost finished on time, which has to be a record. I think, within the period of the three hours designated for this hearing today, we have received an immense amount of valuable information.

Obviously, not all of the witnesses have been in agreement on all points; but, even when there has been disagreement, I find still a thread of common agreement on a number of fundamentals. Concern about the health of the domestic industry I think has certainly been evidenced by everyone who has appeared, and concern about our national security, and the avoidance of too much dependence upon foreign sources, and I think agreement that the whole area is one in which we should begin to do some long-range planning and not wait until some kind of an emergency situation hits us.

That is one of the reasons I felt so strongly that the first month, January, of the 100th Congress should not end without a full airing of the problems that are confronting the domestic energy sector, and the implications that they have for national security and economic security and the stability of the country.

I think we cannot afford to wait. We are at risk if we allow the current situation to drift without dealing with it. And I would say that if we were to adopt a policy of total inaction, I think even those who would not necessarily agree with the proposals that I have outlined would find that we might end up, later, by reacting and overreacting in ways that would not be advisable from the point of view of anyone.

So, the time has certainly come for us to begin that process of building a sensible and logical reaction to the situation we face, and we cannot afford to continue to wait.

I appreciate the input of each and every one of you who has been here and has been a part of these hearings this morning.

The hearings will stand in recess.

[Whereupon, at 12:12 p.m., the hearing was adjourned.]

[By direction of the chairman the following communications were made a part of the hearing record:]

BEFORE THE
UNITED STATES SENATE
SUBCOMMITTEE ON ENERGY
AND AGRICULTURAL TAXATION
OF THE COMMITTEE ON FINANCE

Statement of the
AMERICAN TRUCKING ASSOCIATIONS

ON
OIL IMPORT FEES

SUMMARY

The American Trucking Associations is the national federation representing all sizes and types of motor carriers. An oil import fee would have harsh and inequitable effects on the tens of thousands of businesses that belong to ATA and our 51 state associations and 11 conferences. A fee would raise consumer prices, since it would be reflected directly in the cost of consumer purchases of fuel and indirectly in many other goods and services. It would be an unstable and unreliable deficit reduction device. It would also be very complex once the inevitable exemptions for various producers and users were added.

INEQUITIES

An oil import fee is a tax. For autos, it is equivalent to a gas tax; for trucks and buses, a diesel tax; for aircraft, an aviation fuel tax. A $10-per-barrel import fee adds roughly 24 cents to the price of each gallon of these fuels, almost as surely as a tax on all oil or an explicit tax at the pump.

The fee has many of the same defects as taxes at the pump. It discriminates against different individuals, industries, and companies within the same industry.

Individual victims. An import fee discriminates against individuals based on their location, family size, and work status. It penalizes motorists in Wyoming, Nevada, and Oklahoma, for instance, who on average use twice as much gasoline per capita as New York residents. More generally, small-town and rural residents who do not have an option of public transportation are hit harder than city dwellers. Large families, which are more likely to require larger, hence less fuel-efficient, vehicles also pay more. So do households in which the breadwinner(s) must drive to work. All of these groups have less income on average than the consumers who would escape nearly unscathed: affluent, urban households with small families and small or no cars.

From an equity standpoint, these distributional effects make an oil import fee singularly unattractive. A Congressional Budget Office study estimated that in 1981 low-income households (below $7400) spent 8.2% of income on gasoline alone, while households at the top (over $36,900) spent just 3.7%. More recently, a study by the Washington-based consulting firm, Policy Economics Group ("An Analysis of the Regressivity of Excise Taxes," August 1986), found that "...over one fourth of the gasoline tax is borne by low to moderate income households and less than 4% is borne by high income households" (pp.20-21). Thus any tax that increases the price of gasoline, as an import fee would do, is highly regressive.

Industry victims. An oil fee discriminates against transportation compared with other sectors of the economy. Fuel costs consume from 5 to 25% of operating costs for transportation companies. Fuel is an essential raw material in our businesses: in general, a firm must use more fuel if it is to grow. Unlike other industries, (utilities, for instance), motorists and transportation companies cannot shift to nonpetroleum fuels. Nor can they move production overseas, like some manufacturers.

All transport modes have achieved impressive gains in the efficiency with which their engines burn fuel, but they cannot avoid using oil. That is why the transportation share of oil use has risen steadily from 52% of all users in 1972 to over 62% today, even though unit fuel use has steadily dropped. Hence an import fee will burden transportation more than other oil-using sectors.

Besides transportation, many industries are harmed by a fee. These include recreational, travel, and lodging industries that depend on discretionary spending by consumers and are vulnerable to gasoline or airfare costs; manufacturers of petrochemicals and other petroleum-based products that compete in world markets with producers that do not face a new tax on oil; farmers and other users of those products; domestic carmakers, whose products on average use more fuel than imports; banks and other businesses that sell or lend to countries whose oil sales would drop as a result of a fee.

Victims within transportation. A fee penalizes firms differentially within the transportation sector. Because of the types of products they haul or the distances they travel, the fuel efficiency of different fleets varies. For instance, aircraft or trucks that operate over long distances are inherently more fuel-efficient than short-haul/local ones. Trucks that carry heavy loads must burn more fuel than ones that operate often with light or empty loads. The ability of firms to pass on fuel taxes to their customers varies as well. As a result, a tax would fall very arbitrarily on different firms in the same transport mode.

ECONOMIC AND FISCAL IMPACTS

One recent report estimates that a $10-per-barrel fee would cost the economy 300,000-400,000 jobs and 1% less growth in gross national product in the first year. The losses would occur not only in the specific industries cited above, but throughout the economy as consumers' disposable income dropped and as efficiency declined due to the price distortions of more costly oil products.

An oil import fee is bound to push producer and consumer prices higher than they would otherwise be. This is true whether the tax is imposed when crude oil prices are falling, stable or rising. In each case a fee of $10 per barrel is likely to push up fuel prices by 24 cents per gallon. With motor fuel representing

5.5% of the CPI, such a hike means an immediate jump in the CPI of roughly 1.4%. The price level is likely to rise more as transportation companies, producers of other goods and services with a significant petroleum cost, and of fuels that compete with petroleum, pass on their higher costs to the extent market conditions permit.

These increases are one-time changes. But they trigger cost-of-living adjustments (COLAs) in wage contracts that can ignite a second round of price increases for some products. The tax would also force a larger COLA for social security and many other federal programs. The fiscal dividend would be pared still further by falling income tax collections from transportation and other companies that pay higher fuel costs and cannot pass the costs along. Meanwhile, with no offsetting increase in personal income, a jump in the CPI lowers personal income tax receipts by raising the floor on each bracket and personal exemption. Finally, conservation by motorists lowers highway fuel tax receipts. Thus, the fiscal benefit from an import fee is greatly undermined by declines in other revenues and by higher outlays.

The fiscal impacts can be summarized as follows:

DEFICIT EFFECTS ON OIL IMPORT FEE

Revenue effects	Improves (+) or Worsens (-) Deficit
Direct revenue from fee	+
Windfall profits tax (due to higher domestic crude prices)	+
Individual income tax (due to indexing, GNP & job loss)	-
Social security tax (due to job loss)	-
Corporate income tax (oil industry +, all others -)	-
Existing fuel excise taxes (due to conservation)	-
Outlay effects	
Social security, other entitlements (due to higher CPI)	-
Unemployment, welfare benefits (due to job loss)	-
Net effect	?

EFFECTS ON TRANSPORTATION BUSINESSES

Today, many companies in the trucking, bus, and airline businesses are operating on extremely narrow margins. Their fuel savings have been eaten up in some cases by skyrocketing insurance premiums or passed along to passengers and shippers. An import fee could push some companies out of business. The resulting unemployment would worsen the fiscal picture even more, by cutting employment and income tax receipts and adding to unemployment and welfare outlays.

Some import fee proposals would theoretically remove the tax on oil once its price rose above a certain level. However, the recent history of tax legislation suggests that, once in place, the taxes would more likely be made permanent. Transportation users thus would be denied the benefits of falling prices while getting saddled with the harm of rising prices.

Transportation companies and motorists had to cope with rising fuel prices without government assistance from 1973 to 1981. They responded by making enormous investments in more fuel-efficient vehicles and aircraft--and by suffering heavy losses in many cases. Now an oil fee threatens to rob them of the chance to achieve more normal rates of return and recoup those investments.

COMPLEXITY

An oil import fee would not be enacted without exemptions. Exemptions for home heating oil, fuel used in manufacturing goods for export, agriculture, nonprofit institutions, and governments are frequently suggested. So are exemptions for certain producing countries, notably Mexico, our largest supplier (17% of imports in 1985). Other producing nations are also in precarious financial shape or are equally strategic allies and would doubtless be given preferential treatment.

A justification can be offered for each of these exemptions. Yet each one adds to the complexity and the distortions inherent in an oil import fee. Each one also narrows the tax base, leaving transportation carrying more of the burden.

CONCLUSION

This statement has emphasized the very substantial negatives of an oil import fee for transportation as a whole. The trucking industry is equally opposed to the obvious alternative to an oil import fee: a gas tax.

A gas tax, whether limited strictly to gasoline or applied to all highway fuels, would be extremely damaging and unfair to the trucking industry and other highway users. As noted, a $10-per-barrel tax on imported refined products would be equivalent to a 24-cent-a-gallon tax on gas and diesel. But a highway fuel tax would concentrate the burden even more on only one form of transportation, creating a great competitive disadvantage as well as an absolute cost increase for trucks. It would be grossly unfair to single out one industry to pay such a large share of a tax burden. That is particularly true for trucking, which has historically paid one of the highest effective federal corporate income tax rates and contributes to deficit reduction through payments to the Highway Trust Fund. (The Fund currently has a $13 billion balance, which is being used to reduce the deficit.)

In summary, any form of oil import fee or other tax on oil and refined products would discriminate arbitrarily and unjustly against a variety of individuals and businesses, particularly in transportation. These taxes would be inflationary, distortive, and complex, and would provide minimal fiscal benefits at best. We urge you to drop any such proposals from further consideration.

Statement of
The Associated General Contractors of America

Presented to the
Subcommittee on Energy and Agricultural Taxation
of the Finance Committee
United States Senate
on the Subject of
Taxation of Imported Crude Oil
and Imported Refined Petroleum Products
January 30, 1987

AGC is:

- More than 32,500 firms including 8,400 of America's leading general contracting firms responsible for the employment of 4,000,000-plus employees;
- 106 chapters nationwide;
- More than 80% of America's contract construction of commercial buildings, highways, industrial and municipal-utilities facilities.

The Associated General Contractors of America represents more than 32,500 firms, including 8,400 of America's leading general contracting companies which are responsible for the employment of more than 4,000,000 individuals. These member contractors perform more than 80 percent of America's contract construction of commercial buildings, highways, industrial and municipal-utilities facilities.

This statement of the Associated General Contractors of America neither supports or opposes the imposition of an import fee on crude oil and refined petroleum products, but rather addresses the equitable relief which must be provided to construction contractors working under firm fixed price contracts in the event an oil import fee is imposed.

The construction industry is a major consumer of refined petroleum-based products. Approximately half of the petroleum products consumed by the construction industry is for the operation of construction equipment.

The other half of petroleum-based products consumed by the construction industry is asphalt related. This category includes asphalt used in roofing, but, by far, the greatest amount of asphalt used in the construction industry is for highway construction and highway maintenance work. Over 80% of all the asphalt used in highway construction in the United States is used in federally funded highway construction and maintenance programs.

Procurement in the construction industry is based on open competitive bidding and the firm fixed price contract system. These fixed price contracts may take two, three or four or more years to complete. Once the low bid is accepted and the contract is awarded, a contractor is contractually bound to complete the contract at the firm bid price. A construction contractor does not have the opportunity to increase the contract price to reflect increases in the cost of materials or fuel. Contractors who bid work prior to the imposition of an import fee on crude oil would lose millions of dollars since a dollar increase in the price of a barrel of oil will result in an approximate seven dollar increase in the price of a ton of asphalt.

Contractors with long-term firm fixed price contracts would be unfairly penalized by an import fee on imported crude oil. While contractors must assess and price accordingly the costs of demand and supply situations before winning contracts through open competitive bidding, they should not be penalized by actions of their own government after bid and contract award.

The construction industry, based on open competitive bidding and the fixed price contract system, suffered severely as a result of fuel price increases caused by the Mid-East oil embargo and should not now, or in the future, be penalized by actions of our own government. Consequently, provisions must be established by law or regulation to rebate to the construction contractor the increased costs in hydrocarbons and their derivative products on fixed price or guaranteed maximum price contracts bid or entered into prior to the implementation of any government import fee which results in increased prices in hydrocarbons or their derivative products.

STATEMENT OF

INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

AND

AMERICAN ASSOCIATION OF PETROLEUM LANDMEN
ARKANSAS ROYALTY MEMBERSHIP
CALIFORNIA INDEPENDENT PRODUCERS ASSOCIATION
COASTAL OIL AND GAS ASSOCIATION
EASTERN KANSAS OIL AND GAS ASSOCIATION, INC.
EAST TEXAS PRODUCERS AND ROYALTY OWNERS ASSOCIATION
ENERGY CONSUMERS AND PRODUCERS ASSOCIATION
GEORGIA OIL AND GAS ASSOCIATION
ILLINOIS OIL AND GAS ASSOCIATION
INDEPENDENT OIL AND GAS ASSOCIATION OF NEW YORK
INDEPENDENT OIL AND GAS ASSOCIATION OF WEST VIRGINIA
INDEPENDENT OIL PRODUCERS TRI-STATE, INC.
INDEPENDENT PETROLEUM ASSOCIATION OF MOUNTAIN STATES
INDEPENDENT PETROLEUM ASSOCIATION OF NEW MEXICO
INDIANA OIL AND GAS ASSOCIATION
KENTUCKY OIL AND GAS ASSOCIATION
LIAISON COMMITTEE OF COOPERATING OIL AND GAS ASSOCIATIONS
LOUISIANA LANDOWNERS ASSOCIATION INC.
LOUISIANA ASSOCIATION OF INDEPENDENT PRODUCERS AND ROYALTY OWNERS
MICHIGAN OIL AND GAS ASSOCIATION
NATIONAL STRIPPER WELL ASSOCIATION
NEW YORK STATE OIL PRODUCERS ASSOCIATION
NORTH TEXAS OIL AND GAS ASSOCIATION
OHIO OIL AND GAS ASSOCIATION
OKLAHOMA INDEPENDENT PETROLEUM ASSOCIATION
ORANGE COUNTY PETROLEUM ASSOCIATION
PANHANDLE PRODUCERS AND ROYALTY OWNERS ASSOCIATION
PENNSYLVANIA GRADE CRUDE OIL ASSOCIATION
PENNSYLVANIA OIL AND GAS ASSOCIATION
PERMIAN BASIN PETROLEUM ASSOCIATION
ROYALTY OWNERS AND INDEPENDENT OIL AND GAS PRODUCERS ASSOCIATION OF ARKANSAS
TENNESSEE OIL AND GAS ASSOCIATION
VIRGINIA OIL AND GAS ASSOCIATION
WEST CENTRAL TEXAS OIL AND GAS ASSOCIATION

TO

SENATE SUBCOMMITTEE ON ENERGY AND AGRICULTURAL TAXATION

HEARING ON

ENERGY TAXATION

JANUARY 30, 1987

IMPLICATIONS OF AMERICA'S DECREASED DOMESTIC PETROLEUM CAPABILITY

The Independent Petroleum Association of America (IPAA) believes the federal government must act immediately to ensure a minimum level of dependence on imported oil and adequate levels of energy production within the United States. The IPAA and the 34 unaffiliated state and regional associations listed on the cover page believe the United States must develop an energy plan designed to increase the domestic supply of energy and revitalize the oil, gas, coal, nuclear and synthetic fuels industries in this country.

OVERVIEW

The United States has lost control of its energy future. The nation and the American people are therefore exposed to disruptive economic and security threats more serious than any development short of war. These threats stem from one reality: the Nation will be dependent on foreign oil for more than 50 percent of its oil requirements in approximately two years, and most of these imports will come from unstable and often hostile producers in the Persian Gulf which own 69 percent of the free world's known oil reserves.

By their control and manipulation of oil markets, production and prices, the dominant Persian Gulf producers have, in a matter of months, reduced the domestic petroleum exploration and development industry to economic shambles.

Through the tactic of deliberately collapsing world oil prices and the prices of competing fuels, these Persian Gulf governments have:

- threatened development of all U.S. energy resources such as crude oil, natural gas, coal and nuclear energy;
- caused the cancellation of U.S. development of future energy resources such as synthetic alternative fuels;
- damaged the strength of the national and international banking system;
- undermined conservation; and
- exacerbated our future balance of payments problem.

Unchecked and unchallenged, Persian Gulf oil producing countries have demonstrated a will and capacity to reduce America to a have-not status with respect to vital energy supplies. The dominant Arab OPEC oil producers proclaimed a two-fold purpose in their manipulation of petroleum markets and prices:

(1) eliminate marginal, high-cost production of conventional energy, and

(2) prevent development of energy alternatives substitutable for oil.

The U.S. must act immediately if it is to avoid new energy famines, which result from either deliberate foreign government policies, military hostilities, or violent terrorist acts in the volatile Middle East. National self-interest requires that we recognize an obvious fact: an adequate secure supply of energy provides the underpinning of our economic and military strengths.

Unless U.S. energy producing industries are revitalized, by the mid-90's the Nation's oil import dependence will double from 1985 levels of about 30% of demand. If this happens, the unstable Middle East/North African area will be our principal source of import energy. It would then be possible, and must be anticipated, that anti-U.S. terrorist-prone governments in the region, or the Soviet Union through its Middle East client states, could and would use the "oil weapon" to compromise U.S. global interests, strategic as well as diplomatic.

A dozen times since the first Iranian oil shutdown in 1951, oil supplies from the volatile Middle East have been disrupted, interdicted or embargoed. Only in two cases - both in the 1970's after the U.S. became energy dependent - were Americans seriously affected. These experiences demonstrated that "energy security" involves far broader concerns than military/defense considerations. Under the geopolitical premise described above, the next energy cutoff could again halt traffic in our streets, severely curtail business/economic activity and cost millions of jobs. Every American has a personal stake in having reliable "secure" energy supplies.

I. Countries in the Middle East Will Control the Destiny of the United States

History repeatedly has demonstrated that excessive dependence on oil imports threatens the broad range of national security interests.

Obviously, supply disruptions will impair the United States' military preparedness. These disruptions would have to be met from emergency stockpiles and other temporary measures.

But not so apparent are other vital national security interests that include:

- Diplomatic flexibility through avoidance of exporter leverage over foreign policy
- Superpower parity through minimizing the Soviet advantage in domestic petroleum output
- Alliance cohesion through limiting disruptive competition for the world's available exports
- Financial stability through reduction of trade imbalances and exchange rate vulnerability
- Economic growth through avoidance of erratic oil prices

These interests only can be protected through a reasonable assurance of adequate energy supplies.

Our dependence on imported oil was reduced dramatically from the "oil shock" days of 1973-74 and again in 1979 by arresting the decline in domestic production through the oil industry's investment of some $335 billion in exploration and development. The deliberate manipulation of world oil prices by several OPEC members has reduced the U.S. oil industry to a level that is inadequate to provide the required cash flow and incentive to maintain adequate levels of domestic activity. As a result, once again we have surpassed 30 percent import dependence -- historically a "peril point" where we begin to lose our energy and foreign policy independence. The 1973 Arab embargo occurred when imports represented 35 percent of U.S. consumption. Imports exceeded 44 percent of demand when Iranian supply was disrupted in 1979. [Note: Import dependence is measured as total crude oil and product imports, excluding SPR purchases, as a percent of total domestic supply.]

Today, U.S. dependence on foreign imports is increasing at an alarming rate. Total imports from Arab OPEC countries have increased 185 percent through October, 1986, compared with the same period in 1985. As shown on Figure 1, our total import dependence is rising daily, approaching 40 percent.

PERIL POINT

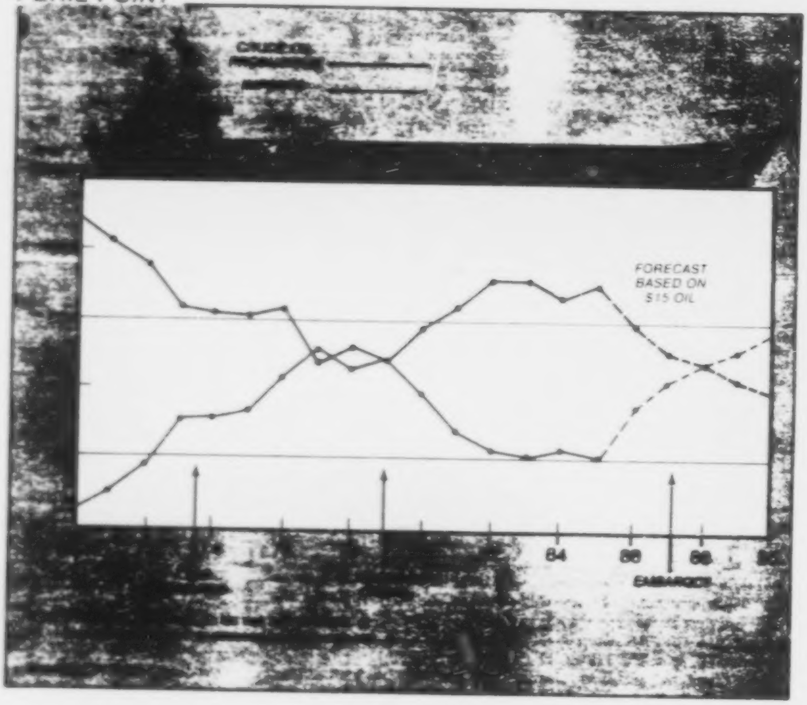
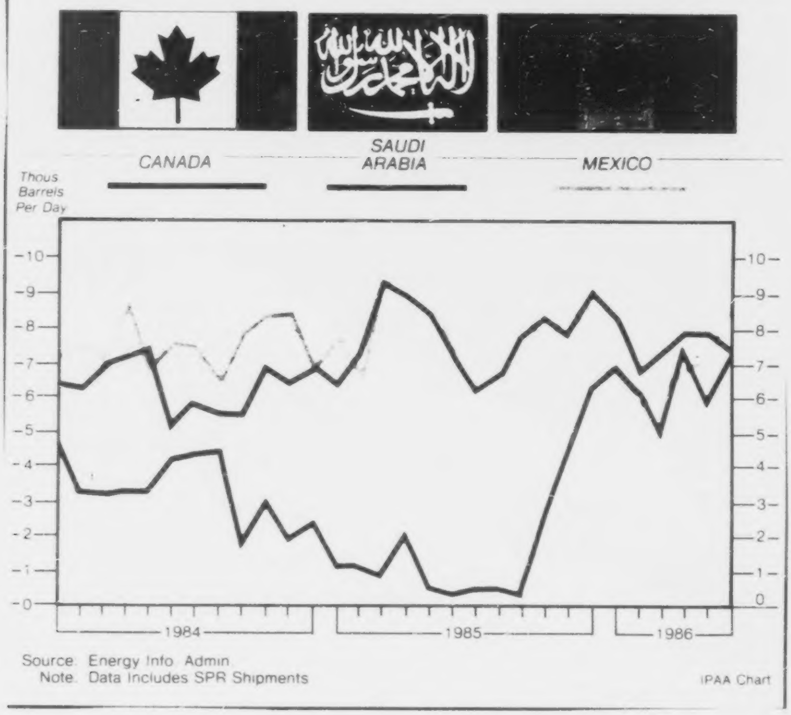


Figure 2 shows our sources of petroleum imports also are shifting in a dramatic way. Until recently, most of our imports came from Western Hemisphere nations such as Canada, Mexico, and Venezuela. In 1985, Saudi Arabia ranked seventh on our crude oil import list. By June 1986, they were first. Some 70 percent of the current oil surplus is in the Persian Gulf and North Africa - countries like Saudia Arabia, Libya, Iran and Iraq - on Russia's doorstep. Secure sources, such as Canada and Mexico, have very limited ability to increase production if Persian Gulf supplies are cut off.

MAJOR SOURCES OF U.S. PETROLEUM IMPORTS.

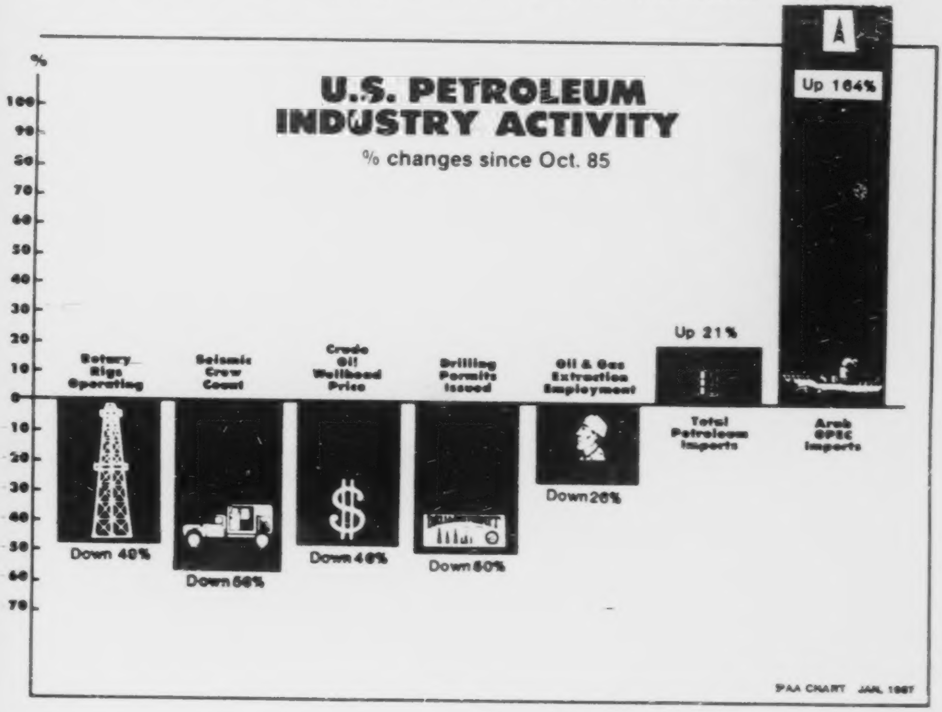


Source: Energy Info. Admin.
Note: Data Includes SPR Shipments

In the Middle East the six year war between Iran and Iraq continues. If Iran is successful in defeating Iraq, will Iran then mount an offensive against other Arab nations such as Saudia Arabia and Kuwait? Will the entire Persian Gulf with its dominant world reserves erupt into full scale war? And if this comes to pass, would the United States and the rest of the free world be able to sustain their economic and military strength without petroleum from the Middle East? Will the U.S. take direct military action as indicated by Secretary of State Schultz on January 27 in testimony to the Senate Foreign Relations Committee?

II. The Collapse of the Domestic Petroleum Industry

Since Saudi Arabia decided in late 1985 to abandon its role as OPEC's swing producer, the already depressed U.S. petroleum industry suffered its worst economic decline in history. Figure 3 compares the latest available industry data with the month of October, 1985, just before OPEC declared its change in strategy to one of maintaining market share rather than supporting prices.



The ensuing flood of petroleum supplies on the world market caused U.S. wellhead crude oil prices to spiral downward by 46 percent during 1986 from $24.06 to an estimated $13 per barrel.

The number of seismic crews scouting for potential drilling sites has declined 56 percent from an average of 357 crew-months in October, 1985, to 157 in December, 1986. The number of drilling permits issued has dropped off 50 percent during the same period from 6,606 to 3,303.

The most familiar indicator, the Hughes rotary rig count, reached its lowest recorded level recently. It has fallen 49 percent from 1,879 rigs operating in October, 1985, to an average of 963 in December, 1986. It has since fallen to 837 as of January 26, 1987.

Turning to the employment picture, 149,000 persons have lost their jobs since October, 1985, in the oil and gas extraction phase of the industry. this is a 26 percent drop, with the total employed now averaging 421,700. This figure only accounts for one sector of the domestic petroleum industry and does not include employment in refining, transportation and marketing.

Many other barometers should be discussed in such a profile of the producing industry but, unfortunately, the statistics are available only on a lagged annual basis and as yet do not reflect current industry problems. Estimates for variables such as acreage under lease, reserves and the number of producing wells vary but generally are pessimistic for the year 1986.

As domestic production is shut in, petroleum imports are continuing to rise. Total crude and product imports already are up 21 percent since October, 1985, to an average of more than 6 million b/d. Moreover, the latest available data indicate that supplies from Arab OPEC countries have skyrocketed to nearly 1.4 million b/d, up 164 percent from October, 1985.

III. Critical Questions

Why is America's level of import dependence so important when our country is so closely tied by oil sharing agreements and international trade to Japan and Western Europe? Some of these countries are far more vulnerable to energy emergencies.

The United States is unique with respect to the risks of intolerable energy dependence. Its role as leader of the free world demands that it achieve relative energy independence, irrespective of energy supply conditions among allied nations. The possible compromise of U.S. strategic and foreign policy options could be costly to the entire free world. Overdependence on Persian Gulf oil could result in actions to force such compromise, either by hostile producing countries or interdiction of supplies by third party nations in proximity to that area. Such hostile acts could neutralize the strengths achieved by trillions of dollars spent by Americans for their own security and that of the free world.

Far more than domestic oil supply for the future is at stake. The collapse of domestic drilling has sharply curtailed new gas production and will lead inescapably to future shortages of this essential fuel. OPEC price manipulation is causing severe economic disruptions in the domestic coal industry as well. The United States possesses a mix of potential energy resources adequate for the forseeable future, but development and production of these resources now is subject to control of oil supplies and prices by Persian Gulf producers. This is an intolerable reality that must be corrected if Americans are to regain control of their energy future. Otherwise, U.S. industrial productivity, economic growth and national security will remain increasingly susceptible to "energy blackmail".

Even without such a precipitious act as an embargo, a continuation of current circumstances could do more harm to the domestic economy than is apparent. Although commonly it is not understood, direct investment in the oil and gas industry is a major driving force within the U.S. economy. It generally has accounted for between 12 and 15 percent of all capital investment. However, direct investment is not the entire picture. It is estimated that for each dollar of direct investment in oil and gas, another $2 to $2.50 of capital investment is generated elsewhere. As a result, from 20 to 30 percent of all capital investment is oil related.

The importance of the drilling industry to other sectors of the economy is illustrated best by a simple example. On average, an onshore well drilled in the U.S. uses 40.5 tons of steel. This equals 81,500 pounds. By contrast, the average passenger automobile manufactured in the U.S. contains 1,250 pounds of steel. Therefore, each well may be thought of as containing roughly the equivalent of 65 cars. This means that the 50,000 wells that should have been drilled in 1986 but, were not, eliminated a market for steel exceeding the combined auto production of Chrysler, Ford and AMC in calendar year 1985.

The same holds true for employment effects. While employment in oil and gas extraction is down by some 488,000 over the past four years, an additional 390,000 jobs have been lost in industries that rely on oil and gas extraction for business. This means that the total job loss to date is at least 878,000. Worse, given projections of severely reduced exploration budgets, that figure easily could increase even more. Because skilled workers, normally employed in the drilling industry but now laid off, eventually find their way into other employment, it will be difficult to rebuild the industry in a time of emergency.

Some believe the oil and gas industry can be "geared up" in times of crisis. How will damage to industry infrastructure and general lag time prevent this?

If low crude oil prices continue, the industry will have lost much of its ability to respond to a crisis. Many stacked rigs will have been scrapped or cannibalized; workers will be unavailable because they will be established in other jobs and careers; banks and investors will be less likely to provide funds for drilling.

The situation after several years of low prices will be very different from that in 1979, when industry response to soaring prices was strong. The industry already was in an expanding mode. There were strong expectations -- shared by bankers and investors -- that prices would go even higher. Universities were enrolling record numbers of geology and petroleum engineering students, and service and supply companies were prospering. But now the industry has suffered a severe contraction and optimism has faded. After a few years, the industry will have lost its ability to respond, except by rebuilding -- a lengthy and costly process.

As prices remain low, the problem will become much worse. Generally, there is a significant time lag between a decision to explore and drill for oil and gas and the eventual production of oil and gas. This lag will grow with the duration of low prices, due to the lack of confidence in the future profitability of the oil and gas sector, the continued devastation of the oil field service industry, and the need to rebuild it. Price volatility and instability add to the time lag, since they contribute to uncertainty about the sustainability of higher oil prices.

Timing is critical. Once destroyed, our oil and gas industry cannot be restored quickly. Many years are required to train geologists, engineers and technicians. Five to ten years will lapse between conception of geological ideas and marketing of significant new production. Action must be taken now to preserve this vital industry, including its supply and service components.

CONCLUSION

The U.S. must act immediately if it is to avoid new energy famines, which could result from either deliberate foreign government policies, military hostilities, or violent terrorist acts in the volatile Middle East. National self-interest requires that we recognize an obvious fact: An adequate, secure supply of energy provides the underpinning of our economic and military strength.

Energy security is not limited to military defense. Industrial productivity, economic stability, transportation systems, amd many of the necessities of all Americans are dependent on reliable supplies of oil and natural gas. Continued destruction of our domestic energy producing capabilites by the deliberate supply and price manipulation of foreign governments is intolerable.

LEGISLATIVE AND REGULATORY ACTIONS NEEDED

TAX ISSUES

For Maintenance of Existing Production:

- Restore percentage depletion for all production at 27-1/2 percent, and
  --Repeal 50 percent of net income per property limitation
  --Repeal the proven property transfer rules
  --Repeal the 65 percent of taxable income limitation per taxpayer
- Repeal Windfall Profit Tax (WPT): Until then, repeal WPT proven property transfer limitations
- Ensure that the "once a stripper, always a stripper" rule is maintained intact
- Repeal Intangible Drilling Costs (IDC) recapture rules
- To prevent the continued premature plugging and abandoning of wells currently operating below the breakeven point, adopt a marginal well production provision using a mechanism to refund WPT previously paid
- Exempt oil and gas exploration and development from the new overhead capitalization rules under Section 263A, Internal Revenue Code (IRC)

STATEMENT OF THE INDEPENDENT REFINERS COALITION
SUBMITTED TO THE SUBCOMMITTEE ON ENERGY AND AGRICULTURE
OF THE SENATE FINANCE COMMITTEE
January 30, 1987

The Independent Refiners Coalition (IRC) is composed of 25 refining companies, including the American Independent Refiners Association (AIRA). A list of IRC member companies is attached as Exhibit A.

The IRC appreciates this opportunity to present our views regarding what the United States government can do to help restore the economic health of the petroleum industry and protect U.S. national and energy security.

Our testimony is based on the premise that the United States must retain enough domestic refining capacity to be essentially self-sufficient in meeting U.S. demand for refined products -- at both normal and emergency demand levels. We think that statistics show that U.S. refining capacity barely meets these requirements today. Compared to all other world regions, the United States now has the lowest refining self-sufficiency ratio (See exhibit B).

The United States will be forced to continue importing crude oil, but there is no justification -- either from a national security nor economic competitiveness perspective -- in becoming more dependent on imported gasoline and other refined products. Dependence on foreign oil suppliers should not be extended to include dependence on foreign refined product suppliers at the expense of U.S. capacity.

We will quantify the impact of proposed crude oil import fee legislation on the U.S. refining sector in relation to other world refiners. We will also quantify the existing competitive disadvantages facing U.S. refiners due to pollution abatement and lead phasedown expenditures which foreign refiners do not bear. We will discuss the problem of competition with state-controlled refineries overseas and the subsidy issue. Finally, we will discuss world tariff and non-tariff barriers which distort trade in refined products and make the U.S. refined product market especially vulnerable to import penetration.

REFINING IS A VITAL SECTOR OF THE PETROLEUM INDUSTRY INVOLVING DISTINCT ECONOMIC AND SECURITY POLICY CONSIDERATIONS

Three separate functions are carried out by the petroleum industry: oil production, refining, and marketing. Too often, these functions are lumped together, both by policymakers and by the industry itself. For instance, many oil companies report refining and marketing profits together, separate from crude oil production. But the problems facing each sector can be quite different.

There are critical public policy reasons to address the problems of each sector separately, and then to balance interests to achieve overall policy goals. Otherwise, well-intentioned policy proposals can have unintended and detrimental effects.

The economics of oil production and refining are distinct, as are the responses of these two sectors to oil prices and supply. For instance, while low oil prices are driving a decline in domestic oil production, they are simultaneously driving higher utilization rates in the refining sector to meet increased product demand. If low oil prices continue to increase U.S. product demand, U.S. refiners must decide whether the economic climate will support additional capital expenditures to increase refining capacity. This decision must be made by both major integrated oil/refining companies and independent refining companies.

If U.S. oil producers's profits were increased by a crude oil import fee, but refined product market prices remained depressed and refineries could not operate at a profit, the net effect would be to drive oil prices back down, reducing producer profits, or to shut down U.S. refining capacity and increase product imports. U.S. oil production profits should go to increasing U.S. oil production, not cross-subsidizing refineries which are operating at a loss. This is especially true when refining losses are caused by product imports which oversupply U.S. markets and drive down prices. We do not believe that this serves the interests of U.S. security and economic policy.

In this respect, any legislation which will increase production costs of U.S. refiners, potentially reduce U.S. refining capacity, or restrain capacity growth to meet increased U.S. demand should include an assessment of the impact of the legislation on U.S. refinery competitiveness in relation to foreign refineries.

INDEPENDENT REFINERS HELP MAINTAIN A COMPETITIVE U.S. INDUSTRY

The U.S. refining industry consists of major integrated companies and independent refiners without significant crude oil reserves. Some refiners are also marketers, while some do no marketing beyond the wholesale level. These independent refiners are as technologically advanced as the major oil company refineries (See exhibit C). Independent refiners are an important source of production and competition in the U.S. marketplace, operating over 25 percent of domestic capacity. As a whole, according to the 1986 Oil & Gas Journal annual refining issue, the U.S. industry is the most sophisticated and flexible refining industry in the world.

There are indisputable economic reasons for maintaining a strong refining sector in the United States. The U.S. refining sector, by any standard, is modern, cost-efficient and highly competitive. The U.S. refining sector is located in the largest gasoline and refined products market in the world. The U.S. refining sector is configured to supply the U.S. market's unique demand for gasoline and other light refined products, while other nations' refineries are mainly geared to produce the heavier products like middle distillates and residual fuel oil.

The oil price increase of the late 1970s caused a decline in U.S. refined product demand, increased fuel switching, and increased conservation. Coupled with the U.S. decontrol of oil prices in

1981, these events caused a major rationalization of the U.S. refining industry by 1983. During that period, U.S. refiners were investing $12 billion in remaining facilities to improve economics and flexibility.

Further shutdowns occurred in 1983 through 1985 due to other factors, including increased gasoline imports. The U.S. refining sector has continued to experience negative or insignificant margins on refining operations in the U.S. since 1983. Except for a few well-publicized upturns like the one that occured in the first half of 1986, netback analyses have often indicated that neither domestic nor foreign refiners have been recovering their production costs and the world market price of crude oil when selling products in the U.S. market. Yet imports of gasoline have continued to rise.

Despite the fact that utilization rates are high, the volatility of oil prices has again squeezed refining margins. The Oil & Gas Journal (1-19-86) reports that, in October 1986, U.S. Gulf Coast refineries experienced negative cash operating margins of over 10 cents per barrel for every barrel of oil refined (See exhibit D). In addition, companies which operate refineries without significant marketing arms are experiencing the same problem.

REFINING CAPACITY IS AS ESSENTIAL TO ENERGY SECURITY AS CRUDE OIL

Our oil supply is only the first link in the energy security chain. The second link is the U.S. refining industry. Oil is basically useless to our economy and military until it is refined. America doesn't use crude oil -- it uses gasoline, jet fuel, heating oil, distillates and residual fuel oils which are processed from crude oil in refineries. The third link is the efficient distribution and marketing of products. Each sector must be competitive with domestic and foreign oil producers, refiners and marketers.

Because the United States cannot escape some dependence on imported oil even under the best of circumstances, the potentially adverse effects can and must be contained. Each link in the chain must be secure to the highest possible degree. Each link must be economically self-sustaining to obtain overall energy security.

The Eastern states (PADD I) are already approaching significant dependence on imported refined products. A disruption in imports would strain the logistics system to offset potential product shortfalls in PADD I from other regions. The potential for short-term supply disruptions clearly exists today. Any further loss of refining capacity to imports in the U.S. would create a critical situation.

THE UNITED STATES HAS NO EXCESS REFINING CAPACITY

According to the National Petroleum Council's major 1986 study of the U.S. refining industry entitled U.S. Petroleum Refining -- in which engineers determined the physical limitations of the domestic refining industry -- we have no reason to be complacent about the current amount of U.S. refining capacity.

The first major conclusion of the NPC report states "The U.S. refining industry is operating at near capacity to produce light products." The NPC states that the U.S. refining industry can sustain a production rate of 6.8 million barrels a day (mmb/d) of gasoline, and can achieve for short durations an output of 7.4 mmb/d. Domestic gasoline consumption has basically exceeded 7 mmb/d since last April, rising to a peak of 7.5 mmb/d (See exhibit E). To our knowledge, every analysis projects that gasoline demand will increase in 1987 by another 2 percent.

The Energy Information Agency (EIA) says that the United States now has about 15.5 mmb/d of "operable" refining capacity (See exhibit F) compared to 1981 capacity of 18.6 mmb/d. According to EIA, about 14.9 mmb/d of U.S. refining capacity is currently "operating" -- actually running. According to the NPC study, however, 470,000 b/d of so-called "operable" capacity had been shut down for over a year as of 1-1-86. In the NPC's words, this capacity "might be classified more realistically as inoperable." If what the NPC engineers say is true, available domestic refining capacity is about 15 mmb/d.

In simple terms, there is no "excess capacity" in the U.S. refining sector. Virtually every barrel of useable capacity is now in service. At a crude oil charge of 13 mmb/d, distillation capacity utilization rates at operating refineries exceed 87 percent. The historic sustainable utilization rate of the U.S. refining industry over the last 30 years has been 85 percent. At the same time, the downstream conversion capacity of U.S. refineries is now operating almost full-out. Conversion capacity is essential to increase the yield of light products from crude oil in U.S. refineries.

In contrast to the refining balance and utilization rates in the United States, it is no secret that massive excess refining capacity exists in Western Europe, Japan and the Middle East. The EEC Council of Ministers estimates that there is approximately .9 mmb/d of excess refinery capacity in Europe which should be rationalized by 1990 if oil prices remain in the $15/bbl range (See exhibit G). Japan has announced plans to rationalize several hundred thousand barrels of capacity, but the effect on Japan's refining industry will be offset because only Japanese refiners may import products and will thus retain their domestic market shares. As prices increase, so does the amount of capacity which should be shut down.

If oil prices rise to the point where demand declines, the excess capacity problem will become more acute unless the EEC, Japan and the Middle East either proceed with rationalization plans or else reduce refinery utilization to levels below 80 percent.

PRODUCT IMPORTS ARE DISPLACING U.S. REFINING CAPACITY

The single product most critical to refining profitability in the United States is gasoline. According to National Petroleum Council statistics, approximately 45 percent of U.S. refinery output is gasoline. If gasoline cannot be produced and sold profitably, most U.S. refineries will lose money over both the short and long terms. For this reason, increasing imports of gasoline and gasoline blending stocks have been particularly alarming to domestic refiners.

According to the Department of Commerce, finished gasoline imports have increased from 55 thousand barrels a day (mb/d) in 1980 to 365 mb/d in 1986 (See exhibit H). Gasoline boiling-range imports have increased from 168 mb/d in 1980 to 542 mb/d in 1986. Such imports have surged to over 700 mb/d in peak months. According to the Energy Information Agency (EIA), imports are slightly lower. About two barrels of refining capacity are required to make one barrel of gasoline. If imports increase faster than U.S. demand, the need to employ domestic capacity is diminished and U.S. plants will shut down. Gasoline import growth in recent years has been due largely to economic distortions caused by unilateral U.S. environmental regulations, TSUS classification loopholes, skewed monetary relationships and the subsidization of refining in certain foreign nations.

Imports of gasoline and blend stocks should not be allowed to displace U.S. capacity. Unless refining economics regain stability and profitability in the U.S. market, subsequent increases in demand will have to be supplied by imports. The U.S. refining industry cannot operate at 100 percent of capacity for any sustained period, so some imports are needed now to meet demand. This situation has arisen because the economics of refining have reached a critical stage.

THE IMPACT OF AN OIL IMPORT FEE ON U.S. REFINERS

OPEC pricing actions in 1986 have injured U.S. oil producers. An import fee has been suggested as a means of reducing the impact of OPEC's actions on the U.S. oil production industry. The IRC has taken no position on whether a crude oil import fee should be imposed. However, we have testified before a number of committees that if a crude oil fee is imposed, then a higher fee must be imposed on refined product imports. The higher product differential would be necessary simply in order to offset higher production costs and working capital charges which the crude oil fee would automatically impose on U.S. refiners. Foreign refiners competing for refined product market share in the United States would not be burdened by these costs.

If no refined product fee were imposed or if the product fee were equal to the crude oil fee, the effect would simply be to shift imports from crude oil to refined products. This would defeat the policy objective of the crude oil fee.

For example, refineries use energy equivalent to about 10 percent of total crude oil processed as refinery fuel. A $5 import fee on crude oil would raise U.S. refiner's operating costs by about 50 cents per barrel, or 10 percent of the fee. In addition, U.S. refiners would have to borrow more money to finance inventory costs, raising working capital costs by 1 percent of the fee. Given these facts, it is imperative that a refined product import fee should be at least 11 percent higher than the crude oil import fee simply to offset the impact of oil import fee legislation (See exhibit 7) and to prevent a legislated disadvantage for U.S. refiners.

The imposition of an equal crude oil and product fee, in addition to existing disadvantages, will provide a major incentive to foreign refiners to increase their U.S. market share. Again, replacing crude imports with refined product imports defeats the basic objective of the import fee.

As we explain below, this higher refined product differential would not act to offset the environmental cost disadvantages already imposed on U.S. refiners. The IRC has calculated and previously testified that the total differential should be about $2.50 - $3.00 per barrel for refined products, or about 20 percent of the crude oil price.

ENVIRONMENTAL REGULATIONS IMPAIR U.S. REFINERY COMPETITIVENESS

Refining is a high volume, low per-unit margin business. We certainly agree that a clean environment is a necessity. But the environmental costs and limitations imposed on U.S. refiners have created a quantifiable competitive disadvantage in relation to foreign refiners which export products to the U.S. market. When the government enacts such legislation it should also be aware of adverse competitive consequences and should act to offset them. We estimate the total environmental cost disadvantage -- the sum of U.S. pollution abatement and lead phase down costs -- at about $1.16 per barrel.

Pollution Abatement Costs

According to the American Petroleum Institute (API) the U.S. refining industry has spent an average of $2.5 billion per year to reduce pollution from the refining process since 1980. This $2.5 billion per-year average includes the cost of new capital equipment necessary to achieve a cleaner environment. Pollution abatement measures have produced a "credit" in the amount of $.5 billion annually in recovered materials and reduced energy use. Taking the year 1983 as an example under API's analysis, the total unrecovered abatement cost yielded a pollution abatement cost of $.44 per barrel of refinery input for U.S. refiners.

The Congressional Budget Office (CBO) has also analyzed this increased cost to U.S. refiners in a study entitled The Budgetary and Economic Effects of Oil Taxes (April 1986). Unlike the analysis carried out by API, the CBO analysis does not account for necessary capital expenditures. As a result, CBO claims that pollution abatement costs in 1983 were only $1.8 billion. Since $.5 billion were recovered in materials and energy, CBO's total pollution abatement cost was $1.3 billion. The CBO analysis yields an increased cost to U.S. refiners of $.30 per barrel of refinery input.

CBO attempted to quantify the costs incurred by foreign refiners to meet their own countries' pollution control standards. The data, which is very spotty, indicates that foreign national pollution abatement costs for all industries are a fraction of those imposed on the U.S. refining industry and U.S. industry in general (See exhibit J).

The API analysis would indicate a disadvantage to U.S. refiners of $.44 cents per barrel processed. CBO estimates the disadvantage at $.30 per barrel processed. While these estimates differ, they both apparently agree on one critical point: that U.S. refiner costs have been increased by U.S. law in relation to foreign costs.

Lead Phasedown Costs

The United States and Japan are the only countries which currently require their refiners to produce very low-lead gasoline. Regarding international competition for the U.S. gasoline market, this means that the cost of U.S. lead phasedown has been borne disproportienately by U.S. refiners. U.S. refiners can use only .1 grams of lead per gallon of gasoline across the board, while foreign refiners can still use up to 3.18 grams of lead to produce gasoline for domestic consumption. U.S. refiners must use higher-cost processes to obtain unleaded octanes while foreign refiners can effectively utilize two different processes -- one for export and one for domestic consumption. The result is that foreign refiners can gain as much as a 9 cents-per-gallon cost advantage over U.S. refiners when trading in the U.S. market. This is equivalent to a disadvantage for U.S. refiners of about $1.75 per barrel of crude oil processed.

Gasoline is produced as components, which are then blended together according to specifications for different grades and customers. Refiners in countries which allow higher lead useage domestically can segregate the high-octane, no-lead components from their domestic gasoline pool and export them as unleaded gasoline or blending components to the United States. Refiners in these nations can then add lead to their remaining domestic pool at very low cost to obtain needed octanes. A technical explanation of this process and a quantification of the advantage given to foreign refiners, depending on their domestic lead allowances, is found in Exhibit K.

CBO analyzed this problem using data compiled by the Environmental Protection Agency (EPA). The EPA study of lead phasedown focused only on the cost of reducing lead in U.S. gasoline refining. It did not review the competitive effects of this reduction in relation to foreign refineries' abilities to export unleaded gasoline and blendstocks to the U.S. market.

The EPA analysis used an average cost of making low-lead octanes instead of the incremental cost. The refining industry must base its decisions on the incremental cost of octane manufacturing, which rises in proportion to the amount of no-lead octanes which are contained in a gallon of gas. Hence, the EPA estimate is unrealistic because it does not reflect the actual cost of lead phasedown. CBO claims that the cost of reducing lead in U.S. gasoline is approximately two cents per gallon and implies that this is the extent of the disadvantage to U.S. refiners. As we have explained, this is simply incorrect.

However, again, both analyses agree that U.S. refiner costs have been increased by U.S. law in relation to foreign refiner costs.

WORLD TARIFF AND NON-TARIFF BARRIERS ARE INEQUITABLE

The current U.S. tariff on finished gasoline imports is a flat rate of 1.25 cents per gallon, or 52.5 cents per barrel of gasoline for nations with Most Favored Nation (MFN) status. So-called "Column 2" imports -- imports from non-MFN nations -- are tariffed at 2.5 cents per gallon. Virtually all U.S. gasoline imports enter under Column 1 status because most refined-product-exporting nations fall under Column 1. This tariff structure was established in 1958, when finished gasoline sold for about 11.55 cents per gallon wholesale. As gasoline prices have risen, the flat rate U.S. tariff has effectively declined, while foreign governments' ad valorem tariffs have risen with prices.

A large quantity of imported gasoline enters the U.S. in the form of components, which are blended together to make finished gasoline. While the tariff rate on blendstocks meant for gasoline use should also be at least 1.25 cents per gallon, there is currently no "actual use" requirement to determine whether components will actually be used as gasoline. As a result, some imports are misclassified at the lower rate for petrochemical and unfinished oil feedstocks of only .25 cents per gallon. Other high-octane components may be classified as other chemicals at higher rates of duty.

The European gasoline tariff on U.S. gasoline and gasoline from other nations not favored by the EEC's Generalized System of Preferences (GSP) is 6 percent ad valorem. At current prices of about 54 cents per gallon, the European tariff on any U.S. gasoline export would be 3.24 cents per gallon, compared to the U.S. tariff on European exports of 1.25 cents per gallon. Such differences are not small matters to refiners, because a penny a gallon can determine profit or loss.

The EEC, in the past, allowed duty-free entry of refined products and petrochemicals from the Middle East based on GSP allowances. However, concern over dramatically increased Saudi and other Middle Eastern nations' petrochemical shipments has caused the Community to impose tariffs of 12.5 to 13 percent on such products.

There is a real possibility that the EEC will impose high tariffs on refined products in excess of preference levels from the Middle East region. The EEC has engaged in talks with the Gulf Cooperation Council concerning tariff treatment for increased imports of refined products.

The EEC estimates that about one million barrels per day of new OPEC export product from the Middle East and North Africa will hit world markets by 1990. The EEC says that it should take about 40 percent of this new product, with Japan and Asia taking 35 percent and the U.S. taking 25 percent. Such market division is contrary to International Energy Agency (IEA) policy which states that market forces should determine the flow of trade. In addition, European imports are primarily of distillate and residual fuels, which means that gasoline and blendstocks are more likely to be diverted to the U.S. by EEC actions.

To the extent that Middle Eastern products enter EEC markets, they tend to force EEC products out of the EEC onto world markets. U.S./EEC tariffs are disproportionately favorable to EEC exports while effectively halting any U.S. gasoline exports to the EEC.

Japan has finally begun to accept gasoline imports due to pressure from the International Energy Agency (IEA). However, imports may be purchased only by Japanese refiners, allowing them to retain domestic market shares despite some announced capacity reductions.

FOREIGN GOVERNMENT CONTROL OF REFINING IS INCREASING

On an international level, the U.S. refining industry is in competition with large, state-owned oil, refining and marketing companies. Unfair competition by state-owned enterprises is a problem which is faced by U.S. industries on an ever-widening basis -- particularly in energy-related trade.

Approximately 90 percent of the world's oil and gas reserves are owned by governments. Governments also control the vast majority of global refining capacity. Some 50 percent of the Free World's refining capacity is now owned or controlled by governments which also own and control the exploitation of their nations' oil and natural gas reserves. In the non-market-economy nations, refining is completely controlled by the government. In nations where excess refining capacity exists, that capacity can be kept operating by absorbing its losses into profits from crude oil sales through the state enterprise structure.

The potential for governments to subsidize their refineries and the marketing of refined products is a major source of concern to U.S. refiners, particularly in the independent sector. Refining companies which do not own significant crude oil reserves cannot make up refining losses by crude oil profits. Privately owned integrated oil companies cannot economically do so either. U.S. energy and economic policy should not accept or promote such cross-subsidization.

The extent to which unfair government subsidization has actually occured or is occuring is the subject of intense debate. In its May 1985 study on foreign government natural resource pricing, the ITC reported "Netback calculations on Saudi export sales of petroleum products do indicate the practice of pricing below export levels the crude petroleum that goes into the Saudi refining industry." U.S. refiners cannot be expected to compete successfully against such subsidies in Saudi Arabia or any other nation.

If product prices do not allow U.S. refiners to recover OPEC crude oil prices and operating costs, new OPEC exports could shut down U.S. refining capacity. In addition, the East West Center reports that Mid-East joint venture refineries cannot recover full investment costs at current crude oil prices.

Petroleum Intelligence Weekly (1-19-87) reports that "Saudi Arabia's commitment to pricing products from its new export refineries on a market-related basis has not wavered, despite OPEC's resurrection of fixed crude oil prices...State Petromin [the Saudi government oil company] evidently wants to fully exploit the flexibly-priced alternative offered by refined product exports." The same issue reports that there could be a swing away from crude exports to product exports.

CONCLUSIONS

The U.S. refining industry is a vital link in the chain of energy and national security -- as essential to both as the oil production industry. U.S. refining capacity has reached a critical stage. Imports of light refined products like gasoline should not displace U.S. capacity.

If an oil import fee is adopted, an 11 percent higher fee must be placed on refined product imports in order to avoid legislating an automatic production cost advantage for foreign refiners.

The United States should also offset the effects of higher U.S. environmental and lead phasedown costs on U.S. refiners compared to foreign refiner costs. We estimate the U.S. disadvantage at about $2.19 per barrel. Until other nations enact lead phasedown requirements for their domestically used products, it is unfair to force U.S. refiners to compete against a legislated cost disadvantage.

Congress should seek equalization of world tariff and non-tariff barriers to refined product trade. The goal is to eliminate barriers. However, until this can be accomplished, the United States should equalize the terms of competition between European and U.S. refiners by converting the fixed rate U.S. tariff to an ad valorem tariff at least equivalent to the EEC tariff on U.S. gasoline imports of 6 percent.

If gasoline and other product imports are being sold in the United States at prices which do not recover the market price of crude oil and refinery operating costs, the U.S. government should intervene to offset the injury to U.S. refiners by making natural resource subsidies actionable under U.S. trade law. Otherwise, discriminatory crude oil pricing policies of foreign governments could shut down more U.S. capacity. As OPEC regains oil price control and becomes capable of establishing an "official selling price" for crude oil again, the potential for certain foreign refineries to receive crude oil at less than the world market price becomes evident.

EXHIBIT A

MEMBERS OF THE INDEPENDENT REFINERS COALITION

American Independent Refiners Association

American Petrofina, Inc.

Ashland Oil Company

Crown Central Petroleum Corporation

Diamond Shamrock Corporation

Indiana Farm Bureau Cooperative Association, Inc.

National Cooperative Refinery Association

Newhall Refining Company, Inc.

Rock Island Refining Corporation

Tesoro Petroleum Corporation

Texas City Refining, Inc.

Tosco Corporation

Valero Energy Corp./Valero Refining & Marketing Co.

EXHIBIT B

Refining Self-Sufficiency Ratio

	1979	1980	1981	1982	1983	1984
Middle East	2.01	1.86	1.64	1.74	1.68	1.63
Latin America	1.74	1.69	1.70	1.57	1.54	1.49
Southeast Asia	1.29	1.28	1.28	1.30	1.38	1.40
Africa	1.25	1.18	1.11	1.23	1.21	1.27
Canada	1.03	.99	1.04	1.23	1.17	1.18
Centrally Planned Economics	.98	.99	1.04	1.07	1.08	1.09
Western Europe	1.16	1.25	1.30	1.23	1.18	1.09
Japan	.82	.98	1.03	1.06	.96	.93
Australasia	.84	.89	.91	.93	.96	.92
South Asia	.90	.90	.85	.90	.91	.86
U.S.A.	.85	.94	1.00	.97	.91	.85

SOURCE: BP Statistical Review of World Energy

- Regional refining capacity as reported by BP was multiplied by 0.85 to allow for maintenance downtime, seasonal demand fluctuations and modest growth in refined product demand to get usable capacity.
- The usable refining capacity was divided by the regional oil consumption as reported by BP to determine the "Refining Self-sufficiency Ratio."
- Regions with Refining Self-sufficiency Ratios below 1.0 cannot refine all the oil they consume and have probably rationalized refining capacity to the point where national security is impaired.
- Using BP's data which overstates U.S. operating refinery capacity, the U.S.A. has the worst ratio of all regions.
- If we use the 1984 year-end U.S.A.capacity, our ratio becomes 0.8.

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EXHIBIT C

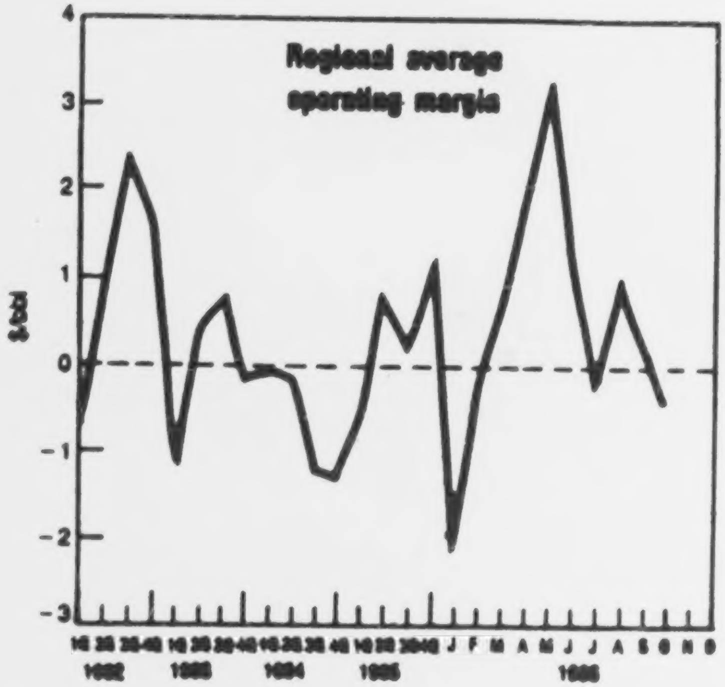
COMPARISON OF COMPLEXITY AND EFFICIENCY BETWEEN INDEPENDENTS AND MAJOR OIL COMPANIES

	1982		Inds. Adv.	1983		Inds. Adv.
	Majors	Independs	Over Majs.	Majors	Independs	Over Majs.
Complexity	9.11	9.08	(.03)	10.50	10.30	(.20)
Fuel Use (MBTU/Barrel)	536	496	40	663	525	138
Overall Wt. Loss (%)	0.87	0.68	.19	0.61	0.70	(.09)
Cash Operating Costs ($/Barrel)	3.97	3.72	.25	3.78	3.44	.34
Average Plant Age (3 years)				22	14	8
Number of Refineries in Survey	54	21		46	25	

Source: "Fuels Refining Performance Analysis," Lee H.Solomon

EXHIBIT D

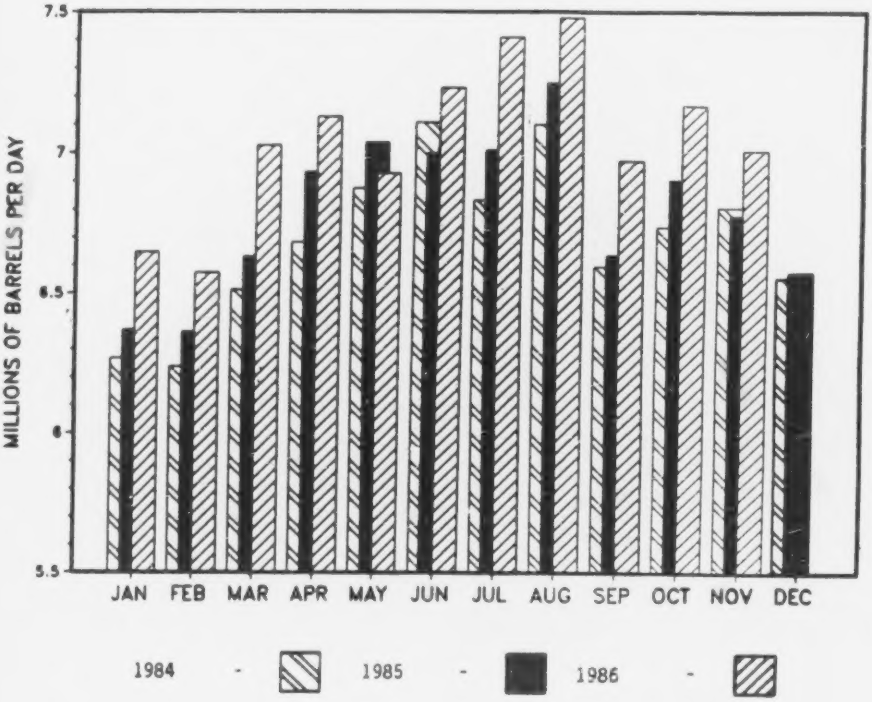
Gulf Coast refining margins



88 Oil & Gas Journal, Jan 19, 1987

EXHIBIT E

U.S. MOTOR GASOLINE CONSUMPTION

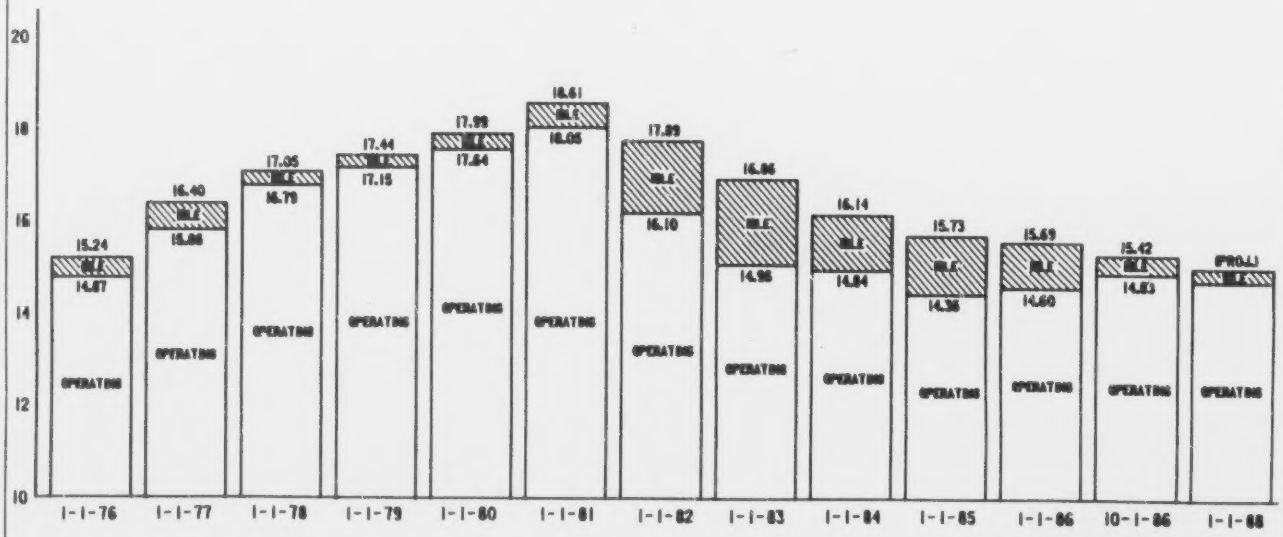


Source: The First Boston Corporation, based on American Petroleum Institute Data

December 1986

EXHIBIT F

U.S. REFINING CAPACITY
(MILLION BARRELS PER CALENDAR DAY)



SOURCE: DOE/EIA, O&GJ, IRC
BY: COH 1/28/87

EXHIBIT G

Surplus capacity still plagues W. European refiners

The refining industry in the 12 member European Community (EC) has too much primary distillation capacity despite a series of plant shutdowns.

EC capacity fell by 810,000 b/d to 12.64 million b/d during 1985. Taking into account this reduction, the European Commission says, there is still 1 million b/d of excess capacity, based on an average utilization rate of 80%. Further closures, planned mainly in France and Italy, are scheduled to reduce EC primary distillation capacity to 11.78 million b/d by 1990.

Utilization rates for primary distillation capacity varied considerably last year. In West Germany, Britain, and Denmark, rates were more than 80%. But Italy and Portugal reported less than 60%. Utilization rates for conversion capacity were generally higher, averaging about 82%.

Prices, imports. The European Commission, which bases its report on interviews with refiners, governments, and trade unions, says it is difficult to assess future relationship between capacity and demand because of uncertainties about crude prices. So the commission produced three price scenarios.

The base case involves $20/bbl oil for the rest of the decade, which would leave EC oil consumption at its present level to 1990.

If the price leveled out at $15/bbl, demand would increase by about 10% during the period. And if the price recovered to $25/bbl, there would be a 5% drop in demand.

Working out the level of primary distillation capacity needed by EC members by 1990s is complicated by products imports.

The commission has not changed its view, put forward last year, that new export refineries in the Middle East and North Africa will place an added 1 million b/d of products on the market by 1990. It noted, however, that key domestic refinery projects in Saudi Arabia have been canceled. So some products from export refineries are being diverted to internal use.

Excluding feedstocks, EC's net products imports of 616,000 b/d in 1985 were 103,000 b/d higher than forecast. Uncertainty also surrounds the future level of imports.

EC's net imports, excluding feedstocks, might increase from the 1985 level to 822,000 b/d by 1990. That is based on the assumption that more imports from the Middle East and North Africa will move into EC countries in accordance with market forces and without government intervention.

Capacity shutdowns. Commission data show that in the $20/bbl base case closure of 1.3 million b/d of EC primary distillation capacity will be needed, including 860,000 b/d currently planned, to reach a satisfactory utilization rate.

Oil at $15/bbl will not require a major reduction in capacity beyond the planned 860,000 b/d. Primary distillation capacity and demand will be broadly in balance, although one or two obsolete refineries might have to be shut down. A stabilized price of $25/bbl will require closures totaling 1.95 million b/d, continue the contraction of the fuel oil market, and require more spending for deep conversion units after 1990. Even in the scenario of highest consumption there will be enough spare capacity in EC member country refineries to meet community demand. However, there might be a need for increased imports of some products. None of the scenarios presents security of supply problems, the European Commission said. •

The shrinkage in EC primary distillation capacity*

	Maximum capacity†	1980	1985	1986	§1990
	Million b/d				
Belgium	1.13	1.13	0.63	0.63	0.61
Denmark	0.25	0.25	0.16	0.16	0.16
France	3.59	3.43	2.28	2.28	1.99
West Germany	3.26	3.16	2.13	1.80	1.62
Greece	0.41	0.41	0.36	0.36	0.36
Ireland	0.06	0.06	0.06	0.06	0.06
Italy	0.76	3.69	2.63	2.50	2.30
Netherlands	2.09	2.09	1.52	1.50	1.37
Portugal	0.39	0.39	0.28	0.28	0.28
Spain	1.47	1.47	1.37	1.27	1.27
U.K.	2.84	2.81	2.03	1.80	1.76
Total	19.25	18.89	13.48	12.64	11.78

*Capacity as of Jan. 1 each year. The 12th EC member, Luxembourg, has no refineries. †Maximum capacity reached in 1980 by Spain and Portugal, 1979 by West Germany, 1978 by U.K., and 1977 by others. §Estimate based on published closure notices and information from oil companies.

Source: European Commission

EXHIBIT H1

Imported Gasoline/Naphtha Market Share

Year	Motor Gasoline[1] Supplied, MBCD	Gasoline Imports[2]		Gasoline Plus Naphtha Imports[3]	
		MBCD	Market Share %	MBCD	Market Share %
1978	7412	54	0.7	205	2.8
1979	7034	70	1.1	208	3.0
1980	6579	55	0.8	168	2.6
1981	6588	91	1.4	191	2.9
1982	6539	126	1.9	263	4.0
1983	6622	212	3.2	339	5.1
1984	6693	276	4.1	480	7.2
1985	6831	348	5.1	502	7.4
1985(4)	6835	349	5.1	500	7.3
1986(4)	7016	365	5.2	542	7.7

(1) EIA/Petroleum Supply Monthly, October, 1986.

(2) U.S. Department Of Commerce, imports under TSUSA No. 475.25.

(3) U.S. Department of Commerce, imports under TSUSA No. 475.25 and TSUSA No. 475.35.

(4) Year-To-Date, November.

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EXHIBIT H2

01/19/87

U.S. GASOLINE & NAPHTHA IMPORTS
JANUARY-NOVEMBER, 1986
(BARRELS)

COUNTRY OF ORIGIN	LEADED GASOLINE	UNLEADED GASOLINE	NAPHTHA	TOTAL	MB/D
VENEZUELA	239,197	23,725,239	13,873,631	37,838,067	113.29
CANADA	2,027,185	9,973,490	2,814,138	14,814,813	44.36
NETHERLANDS	6,503,281	6,301,771	1,280,180	14,085,232	42.17
ITALY	1,433,558	7,743,813	3,329,275	12,506,646	37.45
INDIA	0	0	11,870,667	11,870,667	35.54
ALGERIA	60,116	3,559,056	7,779,245	11,398,417	34.13
SAUDI ARABIA	474,705	7,283,743	2,927,383	10,685,831	31.99
BRAZIL	0	9,367,449	259,778	9,627,227	28.82
SPAIN	2,206,126	5,215,939	0	7,422,065	22.22
CHINA	5,097,256	1,517,558	722,427	7,337,241	21.97
N. ANTILLES	1,338,219	4,677,191	307,120	6,322,530	18.93
ROMANIA	0	3,223,320	2,084,439	5,307,759	15.89
INDONESIA	0	0	4,248,258	4,248,258	12.72
BELGIUM	141,613	1,581,594	1,314,171	3,037,378	9.09
ARAB EMIRATES	0	1,701,494	1,251,764	2,953,258	8.84
UNITED KINGDOM	158,541	1,776,223	631,950	2,566,714	7.68
FRANCE	234,870	2,184,954	25,488	2,445,312	7.32
GREECE	347,295	1,121,742	695,518	2,164,555	6.48
GERMANY	1,936,633	201,632	0	2,138,265	6.40
MEXICO	122	0	1,757,794	1,757,916	5.26
TURKEY	0	1,720,813	0	1,720,813	5.15
ARGENTINA	0	1,455,104	92,971	1,548,075	4.63
BAHAMAS	0	1,258,968	0	1,258,968	3.77
KOREA	0	1,207,471	0	1,207,471	3.62
BELIZE	23,684	695,576	250,191	972,451	2.91
BERMUDA	334,922	576,264	0	911,186	2.73
S. AFRICA	483,527	0	0	483,527	1.45
COLOMBIA	0	0	464,717	464,717	1.39
SINGAPORE	0	0	410,491	410,491	1.23
COSTA RICA	0	0	408,428	408,428	1.22
ISRAEL	230,670	0	129,324	359,994	1.08
DOMINICAN R.	0	98,226	173,824	272,050	0.81
TRINIDAD	0	220,640	0	220,640	0.66
PERU	0	0	210,787	210,787	0.63
GUATEMALA	0	87,390	0	87,390	0.26
HONDURAS	0	80,733	0	80,733	0.24
JAMAICA	0	0	0	0	0.00
JAPAN	0	0	0	0	0.00
N. ZEALAND	0	0	0	0	0.00
PANAMA	0	0	0	0	0.00
UNDERSIZED (1)	169	51	112,039	112,259	0.34
TOTAL	23,271,689	98,560,444	59,425,998	181,258,131	542.69
1986 MB/D	69.68	295.09	177.92	542.69	
1985 MB/D	129.34	219.25	151.45	500.05	

(1) SHIPMENT OF LESS THAN 10,000 BARRELS EACH. DETAILS
NOT PUBLISHED BY PLATTS.

SOURCE: U.S. DEPARTMENT OF COMMERCE, IMPORT SERIES IM145X,
AS PUBLISHED BY PLATT'S OIL EXPORT/IMPORT REPORT.

EXHIBIT [illegible]

Adjustment for Imported Naphthas to Other Uses
(MB/D)

Year	Total Gasoline & Naphtha Imports(1)	Naphthas to Petrochemicals(2)	Special Naphthas(2)	Total Less Naphthas to Petrochemicals	Net Markets Share(3)	Total Less Special Naphthas and Naphtha to Petrochemicals	Net Markets Share(3)
1978	255	8	5	247	1.75	242	1.69
1979	238	11	11	227	2.8	216	2.7
1980	158	21	9	137	2.1	128	1.9
1981	191	15	9	176	2.7	167	2.6
1982	263	18	13	245	3.7	232	3.5
1983	326	17	25	309	4.6	284	4.2
1984	460	53	46	407	6.1	361	5.4
1985	502	23	19	480	7.2	460	6.9
1985(4)	514	19	38	495	7.4	456	6.9
1986(4)	543	61	15	482	6.9	466	6.7

(1) Department of Commerce.
(2) Department of Energy.
(3) Based on motor gasoline supplied as per DOE/EIA Petroleum Supply Monthly, October, 1986.
(4) Year-To-Date, October.

JH:kw
11/20/87

EXHIBIT H4

DOE GASOLINE AND NAPHTHA NET IMPORTS
(Thousand Barrels Per Calendar Day)

						Year-to-Date October	
Finished Gasoline	1981	1982	1983	1984	1985	1985	198
Aviation Gasoline	0	0	1	2	0	0	[illegible]
Leaded Motor Gasoline	89	128	129	132	122	122	5
Unleaded Motor Gasoline	68	69	120	159	255	251	25
Gross Finished Imports	157	197	250	293	378	373	30
Less:							
Imports From Puerto Rico	26	18	14	13	4	5	[illegible]
Imports From Virgin Islands	54	60	55	49	32	31	3
Export	2	20	10	6	10	8	1
Net Finished Imports	75	119	171	225	332	329	26
Unfinished Gasoline							
Naphtha and Lighter							6
Blending Components	24	42	35	79	64	63	7
Pentanes Plus	3	15	7	46	51	51	2
Special Naphthas	9	19	23	56	34	34	1
Petrochemical Naphthas	10	18	12	13	23	16	6
Gross Unfinished Imports	46	94	77	194	172	164	23
Less:							
From Virgin Islands & Puerto Rico:							
Blending Components	2	0	0	0	0	0	[illegible]
Special Naphthas	0	0	0	0	8	8	[illegible]
Exports of:							
Pentanes Plus	0	0	0	0	2	1	[illegible]
Petrochemical Naphthas	5	4	5	6	4	4	[illegible]
Special Naphthas	11	5	3	2	1	1	[illegible]
Net Unfinished Imports	28	85	69	186	157	156	21
Net Gasoline Range Imports	103	204	240	401	489	485	47

Source DOE/EIA.

CH/kw
01/28/87

EXHIBIT I-1

1984 U.S. REFINERY FUEL CONSUMPTION

	Physical Units	Million Btu's Per Unit	Million Btu's
Crude Oil	153,000 barrels	5.800	887,400
Distillate Fuel Oil	1,451,000 barrels	5.825	8,452,075
Residual Fuel Oil	18,814,000 barrels	6.287	118,283,618
Liquified Petroleum Gases	8,419,000 barrels	3.599	30,299,981
Natural Gas	573,330 MMcf	1,031	591,103,230
Still Gas	1,922,230,000 barrels	6.000	1,153,380,000
Marketable Petroleum Coke	1,950,000 barrels	6.024	11,746,800
Catalyst Petroleum Coke	65,666,000 barrels	6.024	395,571,984
Coal	347,000 short tons	24.230	8,407,810
Purchased electricity	29,354 million KWH	10,445	306,602,530
Purchased steam	30,635 million pounds	1,200	36,762,000
Hydrogen	793 MMcf	324	256,932
Other	1,527,000 barrels	5.796	8,850,492
			2,670,604,852

Energy used per barrel of refinery input	0.556
Energy used per barrel of crude input	0.606
Energy used per barrel of total gasoline produced	1.131
Energy used per barrel of net gasoline produced	1.258

SOURCE: DOE/EIA Petroleum Supply Annual 1984

- With the exception of natural gas, coal and purchased electricity and steam, the energy consumed comes directly from the feedstock.
  - 65 % of energy used changes as crude costs change
  - 35 % of energy used can be assumed to change with crude cost
- Should a tax be levied upon imported crude oil and feedstocks, U.S. refinery fuel costs will increase while foreign refinery fuel costs remain at world price levels.
- This creates a competitive disadvantage that Congress must offset should it enact a tax on imported crude and feedstocks.
- Product fees need to be at least 10 percent more than feedstock fees to offset increased fuel costs.

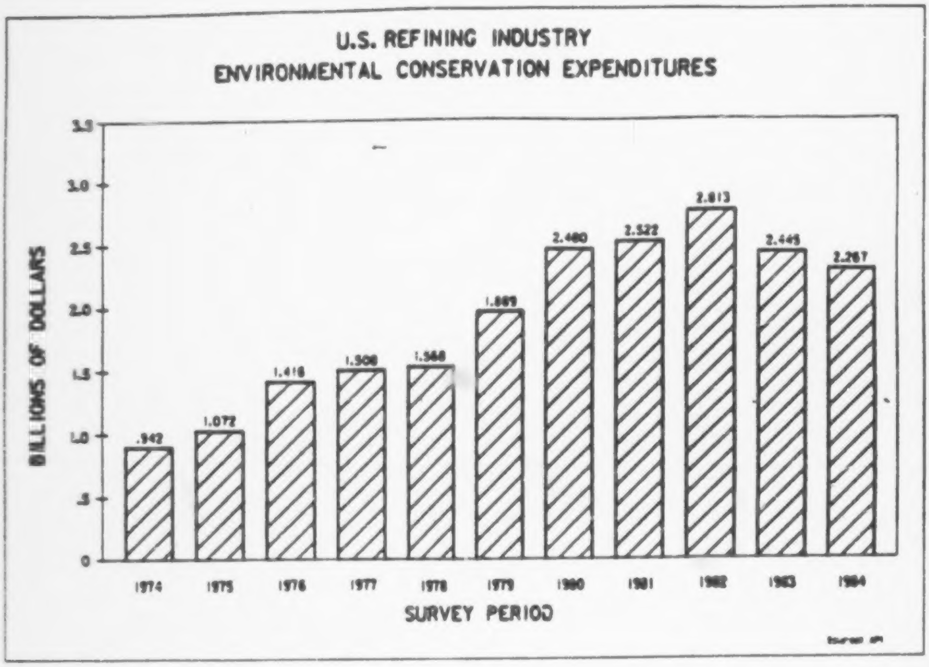
EXHIBIT I-2

WORKING INVENTORY REQUIREMENTS

DATE	STOCKS HELD AT REFINERIES (millions of barrels)	REFINERY CRUDE RUNS (millions barrels/day)	STOCKS HELD AT REFINERIES (days)
12-31-81	466.4	12.470	37.4
12-31-82	431.7	11.774	36.7
12-31-83	402.5	11.685	34.4
12-31-84	394.7	12.044	32.8
11-30-85	407.8	11.973	34.1
AVERAGE	420.6	11.999	35.1

- Refiners have large incentives to reduce stocks
    - high interest rates
    - expectations of falling oil prices.
- The failure to reduce stocks means these must be minimum working inventories.
- An import tax increases the cost of carrying this required inventory by 35 times the interest rate times the import tax.
- At a 10 percent interest rate, this translates into about a 1 percent increase in operating costs.
- Foreign refiners do not have to pay this cost and thereby gain a competitive advantage.
- Product fees need to be at least 1 percent more than feedstock fees to offset increased working capital costs.

EXHIBIT J-1



Source: API

- The above pollution control expenditures are based upon individual oil company expenditures, as reported to the American Petroleum Institute.

- Since 1980 the refining industry has spent over $2.5 billion per year to preserve the U.S. environment.

- This is equivalent to 2.5 cents for every gallon of gasoline produced.

- This unilateral quest for a clean environment creates a competitive disadvantage that should be offset.

EXHIBIT J-2

POLLUTION CONTROL EXPENDITURES IN THE UNITED STATES, CANADA, JAPAN, AND WEST GERMANY, 1973-1982 (In billions of current dollars and as a percentage of gross domestic product)

Year	United States		Canada		Japan		West Germany	
	Billions of Dollars	Percentage of GDP	Billions of Dollars	Percentage of GDP	Billions of Dollars	Percentage of GDP	Billions of Dollars	Percentage of GDP
1973	4.9	0.38	0.13	0.10	1.8	0.45	NA	NA
1974	5.7	0.41	0.14	0.09	3.1	0.69	NA	NA
1975	7.0	0.46	0.14	0.08	3.2	0.64	1.0	0.24
1976	7.2	0.43	0.14	0.06	2.7	0.47	1.0	0.21
1977	7.3	0.38	0.05	0.03	1.7	0.22	1.1	0.18
1978	7.6	0.35	0.06	0.03	1.7	0.16	1.2	0.17
1979	8.4	0.35	0.09	0.04	1.2	0.13	1.2	0.15
1980	9.2	0.36	NA	NA	1.5	0.13	NA	NA
1981	8.9	0.31	NA	NA	2.0	0.17	NA	NA
1982	8.5	0.28	NA	NA	NA	NA	NA	NA

SOURCES: Congressional Budget Office. Exchange rates and GDP data from International Monetary Fund, *International Financial Statistics* (various years). Pollution control expenditure data for United States from Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (June 1981 and June 1983). Data for the other nations obtained from the respective embassies (1983).

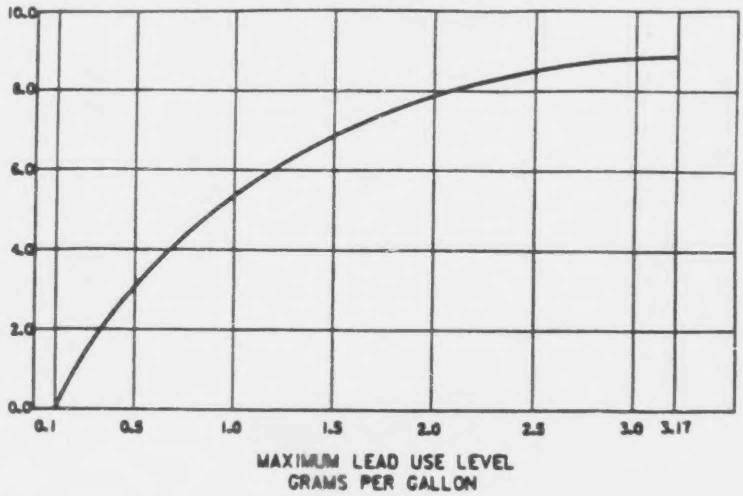
- The data collected by the CBO is indeed spotty; but it shows that U.S. manufactures may be at a competitive disadvantage due to U.S. environmental preservation costs.
- Per EPA's estimate, U.S. costs will increase $2 billion per year under the new lead phasedown regulations.
- Regardless of one's beliefs concerning preserving our environment, one cannot expect a domestic industry to thrive when they have large operating cost components that foreign competitors do not face.

EXHIBIT K1

FIGURE 4

COMPETITIVE DISADVANTAGE CREATED BY U.S. LEAD PHASEDOWN

(CENTS PER GALLON GASOLINE)



- The above competitive disadvantage is based upon the following assumptions:

  -typical lead response in gasoline blending
  -lead cost of 0.7 cents per gram
  -U.S. octane cost of 1 cent per gallon octane.

- The cost of reducing the allowable U.S. lead usage from 1.1 to 0.1 grams per gallon is between 5 and 6 cents per gallon.

  -justifies trading value of lead rights
  -consistent with EPA's cost analysis

- The disadvantage increases as the maximum lead use level of the producing country increases.

  -at 3.17 grams per gallon of lead usage, the disadvantage is almost 9 cents per gallon
  -this will cause foreign refiners to produce gasoline for the U.S. market and cause more U.S. refiners to shut down.

EXHIBIT K2

HOW U.S. LEAD PHASEDOWN PROVIDES AN ADVANTAGE TO FOREIGN GASOLINE AND BLENDSTOCK SUPPLIERS IN THE U.S. MARKETPLACE

To produce 89 octane leaded regular gasoline for domestic consumption, a foreign refiner using 3.18 grams of lead per gallon starts with a blend of unleaded gasoline components with an octane of 77. By adding lead, he can create the remaining 12 octanes to reach the 89 octane level for about 2 cents worth of lead.

The U.S. refiner, who can use 0.1 grams of lead per gallon, can get only one lead-derived octane and must have a blend of unleaded components with an octane of 88. To make up the 11 octane difference with unleaded gasoline blends, the U.S. refiner must resort to high cost technologies which create octanes at costs in excess of one cent each.

The foreign refiner simply buys about 2 cents worth of lead to use in his domestic product and then, at no extra cost, simply changes the set points on the valves that divert high octane components to a high octane tank and low octane components to a low octane tank, to which he adds the lead. Thus, the foreign refiner is able to set aside an 88 octane blend of unleaded components that cost him only 2 cents per gallon in additional production costs. The foreign refiner then competes head-on with the lead-limited U.S. refiner who is spending over 11 cents in additional processing costs to get an equivalent blend.

EXHIBIT K3

	Maximum Lead Usage Rates		
	GMS/Liter	GMS/Gal.	Comments
Africa			
Nigeria	0.77	2.91	
Egypt	0.40-0.84	1.51-3.18	Depending on grade.
Others	0.84	3.18	
Middle East			
Iran	0.56	2.12	
Iraq	0.79	2.99	
Israel	0.42	1.59	
All Others	0.84	3.18	Talking about lead reduction, no timetable as yet.
Far East			
Japan	--	--	Essentially unleaded.
Taiwan	0.32-0.41	1.21-1.55	Depending upon grade.
India	0.56-0.80	2.12-3.03	Depending upon grade.
Pakistan	0.42-0.84	1.59-3.18	Depending upon grade.
Hong Kong	0.40	1.51	
South Korea	0.32	1.21	
Phillipines	0.28	1.06	
Others	0.84	3.18	
Australasia			
Australia	0.84	3.18	Beginning in 1986, new cars must use unleaded.
New Zealand	0.84	3.18	Going to 0.45 gm/l on 7-1-85.
Europe			
Portugal	0.64	2.42	Going to 0.4 gm/l on 1-1-86 to meet EEC standards.
Ireland	0.64	2.42	Going to 0.4 gm/l on 1-1-86 to meet EEC standards.
Spain	0.48-0.65	1.81-2.42	Depending upon grade.
Yugoslavia	0.60	2.27	
Czechoslovakia	0.40	1.51	
Iron curtain	Unknown	--	
Britain	0.40	1.51	Going to 0.15 gm/l on 1-1-86.
W. Germany	0.15	0.57	
Denmark	0.15-0.40	0.57-1.51	Depending upon grade
Austria	0.15	0.57	
Finland	0.40	1.51	
Norway	0.15-0.40	0.57-1.51	Depending upon grade
Italy	0.40	1.51	Bill pending to require 95 octane unleaded availability no more than 0.15 gm/l after June 1, 1986, unleaded priced 10 percent below leaded and and no more than 3 percent benzene content. Considering all unleaded later.
Sweden	0.15	0.57	
Switzerland	0.15	0.57	
Other Europe	0.40	1.51	Talking about change by 1989 will include some unleaded.
Western Hemisphere			
Canada	0.77	2.91	Will go to 0.29 gm/l on 1-1-87 recent average use was 0.49 gm/l.
Mexico	0.70	2.65	
Other Latin America	0.84	3.18	Some countries limit lead content of regular grade gasolines to 0.4 or 0.6 gm/l.
United States	0.03	0.10	Beginning 1-1-86.

CH/sr 09-24-85

IAGC
5335 W. 48th Avenue, Suite 400 • Denver, Colorado 80212 • (303) 458-8404

February 2, 1987

Mr. Cody Graves
Office of Honorable David Boren
Chairman, Subcommittee on Energy
and Agriculture Taxation
Senate Finance Committee
Room 453
Russell Senate Office Building
Washington, D. C. 20512

Dear Mr. Graves:

Steve Larkin of the Petroleum Equipment Suppliers Association in Houston asked me to send you additional information about the geophysical exploration industry to supplement the testimony of William Bradford before the subcommittee on January 30.

The Society of Exploration Geophysicists (SEG) in Tulsa has conducted its monthly SEG seismic crew count since May 1974. This crew count (copy attached of the most recent one showing the December 1986 totals) contains breakouts of U. S., Canadian and international activity. Additionally, SEG prepares an extensive annual geophysical activity report (copy of the most recent 1985 report attached) and has monitored this activity since our industry's inception in the 1930s.

I've also attached the results of a comprehensive survey our organization -- the International Association of Geophysical Contractors -- conducted recently at the request of Deputy Secretary of Energy William F. Martin. This report is titled "Impact of the Current Economic Downturn on the U. S. Geophysical Exploration Industry". You'll note that we organized the results into four "impact" areas: employment, the de-Americanization of the industry, the level of data acquisition activity (taken from the SEG data), capitalization of geophysical contractors, and the present capability of geophysical equipment manufacturers.

The significance of all this data, as Mr. Bradford pointed out in his testimony, is that seismic crew activity in the United States is presently at the level of the mid-1930s, when a barrel of oil sold for around 50 cents . Since the necessary geophysical exploration (utilizing the seismic method) must first be done before exploratory drilling can take place, this means that this segment of the petroleum industry must be restored to some semblance of health in order for America to begin replenishing its dwindling crude oil and natural gas reserves. The IAGC report for Secretary Martin reflects the five problem areas that demand attention.

Recognizing full well that world oil prices are the primary determinant of geophysical activity (and all other oilfield service activities) in the U. S. and internationally, IAGC is not suggesting that tax relief is a panacea to our current, serious problems. But removing current tax burdens and providing new tax incentives can be catalysts to future improvements in the situation, especially in this country. The tax actions we believe would provide immediate help include:

"An international association working for the benefit of the worldwide geophysical exploration industry"

1. Imposing an oil import fee or tariff.

2. Repealing the Fuel Use Act and incremental pricing.

3. Repealing the Windfall Profits Tax.

4. Establishing tax incentives for exploration in remote or "hostile" areas of the U. S.

5. Permitting the expensing of geological and geophysical (G&G) costs, which are capitalized under present law.

These five steps would provide the necessary incentives to major and independent oil company clients to resume the search for new petroleum supplies in the U. S., which -- as you know -- are practically at a virtual standstill. Most of the current geophysical activity, being carried out by 157 land and marine seismic crews, is related to leasing and other exploration commitments or is oriented to enhancing production from known petroleum reservoirs. If there isn't improvement in the situation in the near term (i.e., the next 6-12 months), it's likely that the geophysical contracting industry will not have sufficient capability to increase its level of activity without experiencing several years delay. In the case of a national emergency, this would create an untenable situation.

We would be pleased to supply any additional information you might wish to have about our industry. We're deeply grateful to Senator Boren and other members of the subcommittee for considering steps that would ensure the economic viability of the oilfield service and supply industries, including the geophysical exploration segment.

Most sincerely,

INTERNATIONAL ASSOCIATION
OF GEOPHYSICAL CONTRACTORS

Charles F. Darden

Charles F. Darden
President

CFD/ms

attachments

bcc: Messrs. Don B. Sheffield (w/o att.)
Larry G. Bowles (w/o att.)
Charles D. Matthews (w/o att.)
John Copeland (w/o att.)
J. Stephen Larkin (w/o att.)
Robert J. Young (w/o att.)
John Hyden (w/att.)

PRI Pacific Resources, Inc.

PRI Tower 733 Bishop Street
P O Box 3379 Honolulu, Hawaii 96842
Telephone 808 547-3277 Telex ITT 0292

Robert G. Reed III
Chairman, President and
Chief Executive Officer

February 5, 1987

Senator David L. Boren
Chairman
Subcommittee on Energy and Agricultural Taxation
United States Senate Committee on Finance
Washington, D.C. 20510

Dear Senator Boren:

I am writing to you concerning a recent hearing of your Energy and Agricultural Taxation Subcommittee which addressed, among other things, the possible imposition of an import fee on crude oil and petroleum products. As the Chairman and Chief Executive Officer of Pacific Resources, Inc., I want to explain the basis for our opposition to such fees.

Pacific Resources, Inc. is an independent oil refiner serving two primary markets: Hawaii and Pacific Rim countries. Following the decontrol of oil in 1981, independent refiners faced a new and difficult environment. With government price guarantees no longer available, independent refiners found both markets and profits elusive; only those who were entrepreneurial survived and prospered. At Pacific Resources, we developed new markets for our products in the Far East and the Pacific Islands. Our competition in expanding our markets are the large multinational oil companies and state-owned companies in the various nations we are attempting to serve.

The imposition of an import fee presents us with another, even more formidable, competitor - the government of the United States. 1986 was a difficult enough year in battling the Federal government. New taxes for Superfund, harbor users, customs users, etc... are having a burdensome effect on competition. 1987 is proving even more difficult with potential new fees for trade, oil spill liability funds, and acid rain. To add yet another government tax to this growing list appears to be overkill. To eliminate the burden of fees could possibly better serve the petroleum industry. Clearly, adding fees does not.

Senator David L. Boren
February 5, 1987
Page 2

We agree that oil producers should be protected from foreign government-subsidized oil prices, but such assistance should not penalize other industry segments. If we are to compete internationally, care must be exercised when designing legislation so as not to assist one segment of the economy at the expense of another. A fee does precisely this. However, if a fee is to be imposed, we suggest that it contain a mechanism to allow recapture of the increased cost on crude barrels (domestic or foreign) manufactured into product exported to foreign countries. This mechanism allows crude acquisition costs for foreign-bound products to remain competitive. Taking this action does not penalize one industry segment or favor another, and is consistent with Congress' renewed emphasis on competitiveness. Further, it demonstrates that Congress is serious about keeping American corporations in the forefront of overseas activity.

I realize we need to keep American oil production above levels considered dangerous to national security. But Congress must also be cognizant of the impact of its legislation and should seek balances which assist, not hinder, America's industry. Both production and refining are important to U.S. security, and Congress should work to insure their co-prosperity. By safeguarding exports, Congress can bring all the factors into balance - production, refining, and international competition.

I appreciate the opportunity to present my comments to you.

Sincerely,

Robert G. Reed III

PMAA
PETROLEUM MARKETERS ASSOCIATION OF AMERICA
1120 VERMONT AVE. NW • SUITE 1130 • WASHINGTON, DC [illegible] • [illegible]

February 4, 1987

The Honorable David L. Boren, Chairman
Subcommittee on Energy and Agricultural Taxation
Committee on Finance
United States Senate
Washington, D.C. 20510

RE: January 30 Energy Taxation Hearing

Dear Mr. Chairman:

The Petroleum Marketers Association of America is a federation of 41 state and regional associations representing approximately 11,000 small, independent petroleum product marketers. Collectively these marketers sell over half the gasoline, sixty percent of the diesel fuel and three-quarters of the home heating oil consumed in the country. PMAA is the largest association in the country representing independent petroleum marketers.

The PMAA is vitally concerned about the state of the domestic petroleum industry and would have wanted to appear at your January 30 hearing on energy taxation issues. However, your hearing coincided precisely with PMAA's winter Board of Directors meeting. Therefore, we would like to make the following observations relative to many of the issues discussed and ask that this letter be incorporated as part of the hearing record.

The concern independent marketers have with the stability of the domestic oil industry is basic and straightforward. These marketers are an integral part of that industry and they depend on a strong domestic production and refining industry to supply them the products that they sell.

The problems facing the domestic industry, particularly in the last year, caused by the drastic fall in crude oil prices has been well documented and will not be elaborated on further by PMAA. Rather, PMAA would prefer to discuss some of the proposed solutions to that problem and offer its views on those solutions.

There are two principal considerations PMAA makes when evaluating solutions. The first is that any solution should lessen the government's involvement in the domestic industry. The petroleum industry has often been the victim of regulatory programs designed with such well intentioned goals as to promote competition or to protect the consumer. In reality, however, these programs achieved just the opposite goals. They led to higher consumer prices and to less competition.

The second major consideration for PMAA is the fact that any artificial increase in oil prices within the U.S. will lead to competitive disadvantages for domestic manufacturers, a lower GNP, and higher unemployment. This is not in the long term interests of consumers or any segment of the domestic oil industry.

With that in mind, PMAA wishes to offer its total support to several proposals which have been offered to aid the domestic industry. Included among these proposals are such things as the complete deregulation of natural gas and the opening of more federal lands for offshore drilling. But, since these items are outside the scope of the Finance Committee, PMAA will focus its comments on energy taxation issues.

We support completely the repeal of the Windfall Profits Tax. A misnomer from its inception, the Windfall Profits Tax has no place in an industry premised on market economics. The oil industry should not be subjected to a contradictory government policy which says consumers are to receive the full benefit of oil prices as they fall, but if prices rise again oil industry profits will be taxed away. Moreover, even when prices are below the "windfall level", many companies incur substantial administrative costs in complying with the paperwork requirements of the Internal Revenue Service.

PMAA also supports changes in the tax code which would more equitably distribute the tax burden across all industries. Currently, the domestic oil industry carries one of the heaviest tax burdens of any industry and recent changes in the tax law and enactment of the Superfund tax increased that burden substantially.

PMAA cannot, however, support proposals that impose an import fee on foreign crude oil or petroleum products or which set a floor on domestic crude prices with a variable tax imposed to insure prices never fall below that floor. Such a fee is also a dangerous and inefficient means of dealing with domestic production problems.

Exxon has estimated, for example, that an $5 per barrel fee would increase consumer energy costs by $30 billion. Of that total only one quarter would be returned to the domestic production industry. This is too high a price to pay for such limited assistance.

It is an especially high price when one considers that one consequence of an import fee is to directly involve the government in the day-to-day decisions of our industry. Such government involvement will be required to deal with the exemptions and exceptions that will be politically necessary to enact a fee.

It is also very dangerous for the oil industry to support a floor price which, in essence, endorses a price for oil, even if it is couched a "floor price", at which a company can survive. By endorsing such a price, the industry is setting itself up for legislation from consumer states in hopes that the same price can also serve as a ceiling price.

It is totally inconsistent to argue that the Windfall Profits Tax should be repealed so that companies can benefit completely from upswings in the market, while simultaneously arguing that companies should be protected from downturns by the establishment of a base price for oil. Those in the industry who do support an import tax should be wary of the philosopher's advice, "Be careful what you ask for because you may get it."

PMAA commends Chairman Boren on the fact that as part of his import tax bill, S 302, that there is no differentiation between crude oil and refined products. As bad as an import tax is, one that differentiates between crude and refined product would be devastating to the independent marketing segment.

In conclusion, PMAA wishes to reiterate its strong support for repeal of the Windfall Profits Tax, a review of the tax provisions affecting the domestic petroleum industry with a view toward more equitably distributing the tax burden across all industries; deregulation of natural gas; and the opening of offshore Federal lands for increased drilling. Each of these is a proposal every segment of the industry endorses.

PMAA opposes solutions offered which will substantially re-involve the government in our business and on which the industry, even those directly affected by it, are divided.

We appreciate your consideration of these views and if you have any questions, please call.

Sincerely,

Phillip R. Chisholm

Phillip R. Chisholm
Executive Vice President

PRC:sp

FOR IMMEDIATE RELEASE

January 9, 1987

Contact: David L. Yowell
or Sally Shank
(918) 493-3516

MONTHLY SEISMIC CREW COUNT

(Month of December, 1986)

According to the Society of Exploration Geophysicists' latest report, the number of seismic land crews and marine vessels searching for oil and gas in the U.S. and U.S. waters decreased by one crew from the previous month. The land crew total remained the same and the marine crew total decreased by one.

The December total (157) represents a decrease of 1% from last month, a 52% decrease from December, 1985, a 66% decrease from December, 1984, a 68% decrease from December, 1983, a 67% decrease from December, 1982, a 78% decrease from December, 1981, and a decrease of 73% from the same month in 1980.

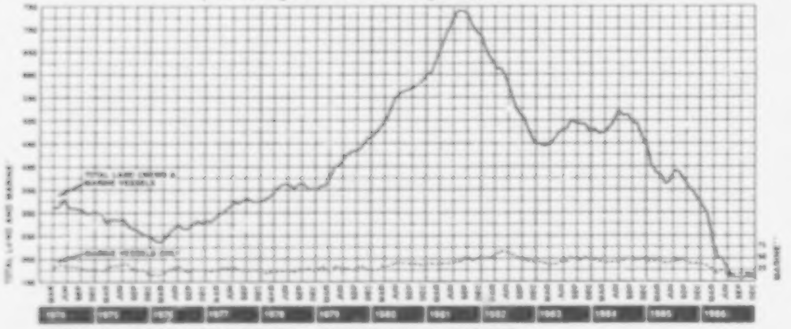
During December, three contractors were operating two of the 139 land crews and one of the eighteen vessels on a speculative basis.

TOTAL LAND & MARINE CREWS:	This Month	Last Month	Dec.'85	Dec.'84	Dec.'83	Dec.'82	Dec.'81	Dec.'80
	157	158	326	466	493	477	703	580

	LAND CREWS								MARINE VESSELS							
	This Mo	Last Mo.	Dec. 1985	Dec. 1984	Dec. 1983	Dec. 1982	Dec. 1981	Dec. 1980	This Mo.	Last Mo.	Dec. 1985	Dec. 1984	Dec. 1983	Dec. 1982	Dec. 1981	Dec. 1980
39 Contr's:	121	121	255	378	408	386	613	500	15	15	33	44	41	42	39	34
7 Oil Co's:	18	18	32	36	37	42	43	40	3	4	6	8	7	7	8	6
1 Gov't.:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	139	139	287	414	445	428	656	540	18	19	39	52	48	49	47	40

SEISMIC CREW COUNT

(The leading indicator of oil and gas exploration activity.)



*Use left hand vertical scale for Total Land Crews and Marine Vessels. **Use right hand vertical scale for Marine Vessels only.

*Results of SEG's Seismic Crew Count of land and marine vessels engaged in exploration for oil and gas in the USA and USA waters, including Alaska, for the month indicated. These figures are compiled from data reported by oil companies operating company-owned seismic exploration crews and vessels and by contract seismic exploration companies. Special significance is attached to seismic crew activity since it is recognized as the leading indicator of all petroleum exploration activity.

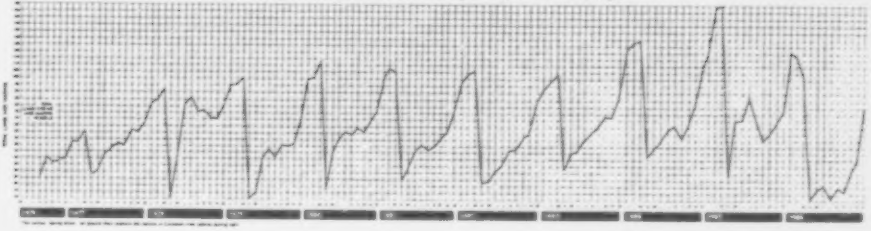
SEG SEISMIC CREW COUNT
Page 2

CANADIAN SEISMIC CREW COUNT

December, 1986 (November figures in parentheses)

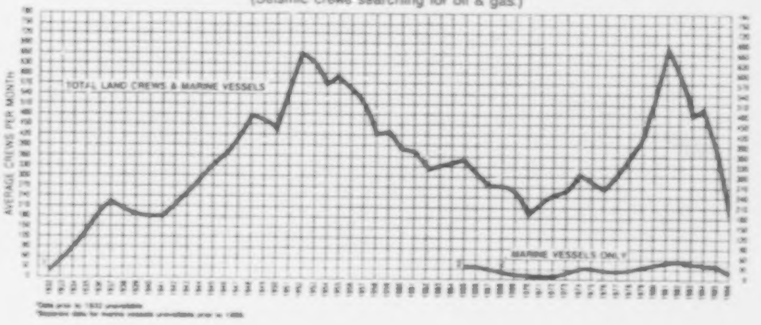
	Land Crews	Marine Vessels
23 Contractors:	78 (42)	0 (0)
1 Oil Company:	2 (0)	0 (0)
Totals:	80 (42)	0 (0)

CANADIAN SEISMIC CREW COUNT
(The leading indicator of oil and gas exploration activity.)



SEG's monthly USA Seismic Crew survey was organized in 1974 at the request of the United States' Federal Energy Administration. The report is currently submitted to the U.S. Department of Energy. Both the U.S. and the international surveys are financed in part by a grant from the International Association of Geophysical Contractors.

HISTORY OF SEISMIC EXPLORATION IN THE UNITED STATES
(Seismic crews searching for oil & gas.)



SOCIETY OF EXPLORATION GEOPHYSICISTS

INTERIM* REPORT OF INTERNATIONAL SEISMIC CREW ACTIVITY

DECEMBER, 1986 (November totals in parentheses)

MEXICO AND CENTRAL & SOUTH AMERICA SEISMIC CREW COUNT

MEXICO	Land	Marine
3 Contractors:	11 (11)	0 (0)
0 Oil Companies:	0 (0)	0 (0)
Totals:	11 (11)	0 (0)

CENTRAL & SOUTH AMERICA	Land	Marine
5 Contractors:	30 (29)	3 (4)
0 Oil Companies:	0 (0)	0 (0)
Totals:	30 (29)	3 (4)

EASTERN HEMISPHERE SEISMIC CREW COUNT

EUROPE	Land	Marine
7 Contractors:	15 (14)	17 (19)
1 Oil Company:	1 (0)	0 (0)
Totals:	16 (14)	17 (19)

MIDDLE EAST**	Land	Marine
6 Contractors:	23 (22)	0 (4)
0 Oil Companies:	0 (0)	0 (0)
Totals:	23 (22)	0 (4)

AFRICA	Land	Marine
7 Contractors:	24 (26)	4 (4)
0 Oil Companies:	0 (0)	0 (0)
Totals:	24 (26)	4 (4)

FAR EAST**	Land	Marine
9 Contractors:	43 (43)	5 (6)
0 Oil Companies:	0 (0)	0 (0)
Totals:	43 (43)	5 (6)

DECEMBER TOTALS:

	Land	Marine
U.S.:	139 (139)	18 (19)
Canada:	80 (42)	0 (0)
Mexico:	11 (11)	0 (0)
Cent. & S. America:	30 (29)	3 (4)
E. Hemisphere:	106 (105)	26 (33)
Subtotals:	366 (326)	47 (56)

Interim Total Land & Marine: 413 (382)

*The December crew and vessel figures for activity in Mexico, Central & South America, and Eastern Hemisphere are incomplete since, at this time, they include only the data reported by those oil companies and contractors who reported the U.S. data. A complete report of international activity is issued quarterly (March, June, September, December).

**"Middle East" includes the eastern Mediterranean area eastward through Pakistan. "Far East" for this survey commences with India and extends eastward through the Pacific Ocean.